Appendix A

Biological Resources Report
&
Wetland Delineation

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

SAN JOSE MUNICIPAL WATER LINE PROJECT
BIOLOGICAL RESOURCES REPORT

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17 July 2009

Project # 3071-01

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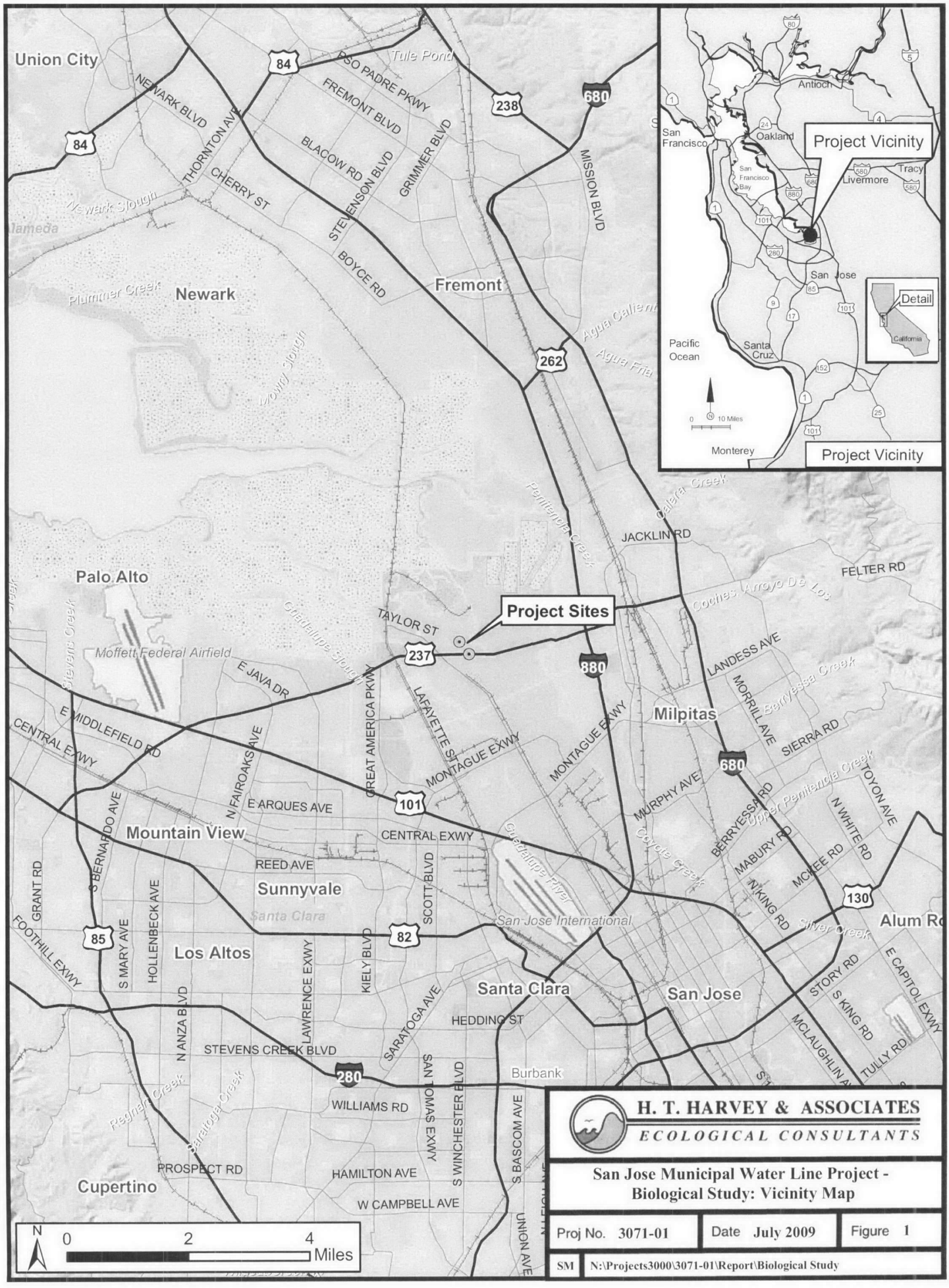
PROJECT DESCRIPTION

The San Jose Municipal Water Line Project (hereinafter "Project") would entail the installation of approximately 1000 linear feet (ft) of 12-inch water line in Alviso, Santa Clara County, California. A 700-ft segment would be installed on San Jose-Santa Clara Water Pollution Control Plant (WPCP) lands beginning at the end of Nortech Parkway and extending southward at a distance approximately 10 ft east of the adjacent office park property line; a strip extending 60 ft east of this property line would be used for water line installation, staging, and access. A 300-ft segment would start between SR 237 and the southeastern-most office park on Baytech Drive and would be installed by means of jack and bore encased in a steel pipe crossing beneath State Route (SR) 237. The northern terminus of this segment would be located approximately 5 ft west of the fence marking the WPCP property line, while the southern terminus would be located near Holger Way on the south side of SR 237. Jack and bore pits and staging/access areas would extend up to 50 ft west of the WPCP property line fence, and may extend slightly east of the fence as well.



H. T. HARVEY & ASSOCIATES
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San Jose Municipal Water Line Project - Biological Study: Vicinity Map

Proj No. 3071-01	Date July 2009	Figure 1
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ENVIRONMENTAL SETTING

GENERAL PROJECT AREA DESCRIPTION

The Project site is located in northern San Jose, just southeast of the town of Alviso. The Project site is situated on the southern fringe of the South San Francisco Bay. As such, the undeveloped lands in the site vicinity are flat, low-lying, and poorly drained. Much of the site was historically farmed and during that time, discing occurred 2-3 times per year, depending on the weed growth between spring and summer. The majority of the site has been extensively disturbed as result of historical farming, or is disturbed by the SR 237 right of way, and is now dominated by non-native upland grassland habitat.

The Project site is situated at an elevation of 0.4-10.5 ft above mean sea level (MSL). Average annual precipitation at the site is approximately 16 inches and the average annual temperature is 59°F (SCS 1968). A single soil type, Willows clay slightly alkali soil, is found within the study area. The Willows clay slightly alkali soil series consists of fine textured, poorly drained soils underlain by sedimentary alluvium, formed in low level positions on alluvial plains.

BIOTIC SURVEYS

H. T. Harvey & Associates biologists conducted reconnaissance-level field surveys of the site on 24 and 26 June 2009. The purpose of our surveys was to describe existing biological conditions of the survey area and provide a project-specific impact assessment for the site. Specifically, surveys were conducted to 1) assess existing biotic habitats; 2) assess the site for its potential to support special-status species and their habitats; and 3) identify sensitive habitats. Survey personnel included wildlife ecologists N. Thorngate, M.S. and S. Rottenborn, Ph.D., and botanist/wetlands ecologist B. Cleary, M.S. The entire Project site (plus areas within 250 ft of the site during wildlife surveys) was walked on foot while the ecologists assessed habitat conditions and looked for special-status species and evidence of their presence.

A survey for potential waters of the U.S. was conducted on 26 June 2009. The vegetation, soils, and hydrology of the site were examined following the guidelines outlined in the "Routine Determination Method" and "Atypical Situations: Man-Induced Wetlands" in the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (USACE 2006). In addition, the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Regional Supplement, USACE 2006) was followed to document site conditions relative to hydrophytic vegetation, hydric soils and wetland hydrology. The Regional Supplement is intended for use with the Corps 1997 Manual; where differences in the two documents occur, the Regional Supplement takes precedence over the Corps 1987 Manual. Information obtained during our 26 June 2009 survey was supplemented by the results of wetland delineation field work performed in September 2006 and January, February, and March 2007 as part of our investigation of the WPCP lands for a separate project (H. T. Harvey & Associates 2007); the study area for that previous delineation work included all of the 700-ft long segment of proposed water line near

Nortech Parkway, as well as the WPCP lands immediately north of SR 237, which comprise a portion of that segment of the water line Project.

BIOTIC HABITATS

The following section provides a description of the biotic habitats found within the survey area and their functions and values. The habitat descriptions are primarily based upon the California Department of Fish and Game's (CDFG) *List of California Terrestrial Natural Communities* (CNDDB 2007). Two biotic habitats are found within the Project site: ruderal/non-native annual grassland and seasonal wetlands.

Ruderal/Non-Native Grassland

Vegetation. The survey areas include ruderal/non-native grassland habitat that has been intensively disturbed as a result of many years of agricultural land use practices. As such, a suite of common, disturbance loving, non-native herbaceous species is found in the study area. Dominant plant species include slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), poison hemlock (*Conium maculatum*), black mustard (*Brassica nigra*), dove's-foot geranium (*Geranium molle*), American vetch (*Vicia americana*), wild lettuce (*Lactuca serriola*), cheese weed (*Malva parviflora*), California bur-clover (*Medicago polymorpha*), wide-leaf filaree (*Erodium botrys*), pineapple weed (*Matricaria matricarioides*), red maids (*Calindrinia ciliata*), field bindweed (*Convolvulus arvensis*), and common sow thistle (*Sonchus oleraceus*). Due to grazing, vegetation in the northern portion of the study area (south of the end of Nortech Parkway) is somewhat shorter and less dense than in the ungrazed and unmown area near the proposed bore pit on the north side of SR 237, where weedy vegetation is tall and dense. The location of the proposed bore pit on the south side of SR 237 is within the construction area for new development, and as a result, most of that area has been recently graded, with only a narrow strip of mown ruderal vegetation along the SR 237 right-of-way fence.

Wildlife. Although annual grasslands can provide foraging and breeding habitat for numerous wildlife species, the limited extent of habitat within the portions of the study area on either side of SR 237, the long history of disturbance of these habitats, and their proximity to traffic along SR 237 and other developed areas limit the value of the ruderal/grassland habitat on the site to wildlife. The majority of these grasslands have historically been disturbed regularly by disking or mowing, and all are currently grazed or mown at least once each year as a fire suppression tactic. Several common reptiles can be expected to inhabit the site, including western fence lizards (*Sceloporus occidentalis*), western garter snakes (*Thamnophis elegans*), and gopher snakes (*Pituophis catenifer*). Bird species observed using the grasslands in the Project area during the reconnaissance survey included an American kestrel (*Falco sparverius*), black phoebes (*Sayornis nigricans*), house finches (*Carpodacus mexicanus*), lesser goldfinches (*Carduelis psaltria*), and house sparrows (*Passer domesticus*). Other grassland-associated bird species known to occur in the area, based on previous wildlife surveys, include white-tailed kites (*Elanus leucurus*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida macroura*), barn swallows (*Hirundo rustica*), tree swallows (*Tachycineta bicolor*), northern mockingbirds (*Mimus polyglottos*), loggerhead shrikes (*Lanius ludovicianus*), white-crowned sparrows

(*Zonotrichia leucophrys*), western meadowlarks (*Sturnella neglecta*), red-winged blackbirds (*Agelaius phoeniceus*), and Brewer's blackbirds (*Euphagus cyanocephalus*).

No burrowing owls (*Athene cunicularia*) were seen during the reconnaissance survey, but suitable breeding and nonbreeding habitat, including California ground squirrel (*Spermophilus beecheyi*) burrows, was noted, and burrowing owls have been observed in close proximity to the northern portion of the Project site during past wildlife surveys (*e.g.*, at Arzino Ranch). In addition to evidence of ground squirrels, mounds belonging to Botta's pocket gophers (*Thomomys bottae*) were seen during the reconnaissance survey. Other mammals that may use the grasslands in the Project area include bats such as the California myotis *(Myotis californicus*), hoary bat (*Lasiurus cinereus*), and big brown bat (*Eptesicus fuscus*), as well as deer mice (*Peromyscus maniculatus*), western harvest mice (*Reithrodontomys megalotis*), California voles (*Microtis californicus*), striped skunks (*Mephitis mephitis*), black-tailed jackrabbits (*Lepus californicus*), and domestic cats (*Felis catus*).

Seasonal Wetlands

Vegetation. Three small patches of seasonal wetlands were identified within the study area. A wetland at the northern end of the Nortech Parkway portion of the Project area appears to have been created recently as a result of a leaking irrigation line and is thus considered a man-induced wetland. A single shallow topographic depression supporting non-native and native seasonal wetland plant species including field chickweed (*Cerastium arvense*), cocklebur (*Xanthium strumarium*), bristly ox-tongue (*Picris echioides*), Italian ryegrass (*Lolium multiflorum*), annual beard grass (*Polypogon monspeliensis*), common spikerush (*Eleocharis macrostachya*) and Himalayan blackberry (*Rubus discolor*) was identified in this area. A second wetland is located very close to the proposed bore pit on the north side of SR 237, where a small patch of broadleaved cattail (*Typha latifolia*) and tall umbrella sedge (*Cyperus eragrostis*) is present between the existing parking lot and SR 237. This wetland is also likely fed by a leaking irrigation line as a small amount of standing water was observed in a hole adjacent to the cattails and parking lot. The third wetland is located just north of SR 237 and east of the fence marking the WPCP property line; this wetland, which is a fairly large wetland previously delineated by H. T. Harvey & Associates for a separate project, extends southwestward into the study area for the current Project. These wetlands also support a preponderance of disturbance-oriented plant species, including curly dock, bristly ox-tongue, hyssop loosestrife (*Lythrum hyssopifolium*), annual beard grass, and toad rush (*Juncus bufonius* ssp. *bufonius*).

Wildlife. Wetland habitats often serve as important foraging and breeding habitat for a wide variety of wildlife species. However, the wetlands within the Project area are of marginal value to wildlife due to their small size, isolation from more extensive wetlands, and the apparently recent development of the two wetlands suspected of being supported by leaky irrigation lines. No wetland-associated wildlife species were observed during the reconnaissance survey. Common species that might occur in these wetlands include the Pacific treefrog (*Pseudacris regilla*) and western toad (*Bufo boreas*), as well as the common bird and mammal species associated with the adjacent ruderal/annual grassland habitats. Black phoebes, house finches, lesser goldfinches, and house sparrows, could forage in and over the wetlands and may obtain drinking water when pools are formed. Bats and other small mammals foraging in the Project area may also exploit the wetlands for foraging and drinking opportunities.

SPECIAL-STATUS PLANT AND ANIMAL SPECIES

Information concerning threatened, endangered or other special-status species that may occur in the Project area was collected from several sources and reviewed by H. T. Harvey & Associates' biologists. These sources included the CNDDB (2009), the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2009), *The Jepson Manual, Higher Plants of California* (Hickman 1993), and other information available through the USFWS, CDFG, and technical publications. The specific habitat requirements and the locations of known occurrences of each special-status species were the principal criteria used for inclusion in the list of species potentially occurring on the site.

Special-status Species Regulations Overview

Federal and state endangered species legislation gives special status to several plant and animal species known to occur in the vicinity of the Project site. In addition, state resource agencies and professional organizations, whose lists are recognized by agencies when reviewing environmental documents, have identified as sensitive some species occurring in the vicinity of the Project site. Such species are referred to collectively as "species of special status" and include plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as "fully protected" under the California Fish and Game Code; animals designated as "Species of Special Concern" by the CDFG; and plants listed as rare or endangered by CNPS.

FESA provisions protect federally listed threatened and endangered species and their habitats from unlawful take. Under the FESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The USFWS regulations define harm to mean "an act which actually kills or injures wildlife." Such an act "may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR §17.3). Activities that may result in "take" of individuals are regulated by the USFWS. The USFWS produced an updated list of candidate species December 6, 2007 (50 CFR Part 17). Candidate species are not afforded any legal protection under FESA; however, candidate species typically receive special attention from federal and state agencies during the environmental review process.

Provisions of CESA protect state-listed threatened and endangered species. CDFG regulates activities that may result in "take" of individuals (*i.e.*, "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. Additionally, the California Fish and Game Code contains lists of vertebrate species designated as "fully protected" (California Fish and Game Code §§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed.

The CDFG maintains three lists of "species of special concern" that serve as "watch lists" including: threatened and endangered species, candidate species, and species of special concern. Species on these lists either are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their

populations should be monitored. They may receive special attention during environmental review, but do not have statutory protection under CESA although many of these species are protected under other state and federal laws. California Species of Concern receive no legal protection as a result of their designation as Species of Special Concern, and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species. However, most, if not all, of these species are currently protected by state and federal laws.

Raptors (*e.g.*, eagles, hawks, and owls) and their nests are protected under both federal and state regulations. The federal Migratory Bird Treaty Act[1] (MBTA) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Birds of prey are protected in California under the State Fish and Game Code. Section 3503.5 states it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG.

Vascular plants listed as rare or endangered by the CNPS, but which may have no designated status under state endangered species legislation, are defined as follows:

List 1A.	Plants presumed to be extirpated or extinct.
List 1B.	Plants rare, threatened, or endangered in California and elsewhere.
List 2.	Plants rare, threatened, or endangered in California, but more numerous elsewhere.
List 3.	Plants about which we need more information – a review list.
List 4.	Plants of limited distribution – a watch list.

These CNPS listings are further described by the following threat code extensions:

.1—seriously endangered in California.

.2—fairly endangered in California.

.3—not very endangered in California.

Impacts to plants on list 1 and 2 are typically assumed to meet CEQA's threshold of significance. CNPS considers it to be mandatory that these species are fully considered during the preparation of environmental documentation relating to CEQA. Very few list 3 and 4 plants meet the definitions of Section 1901 Chapter 10 Native Plant Protection Act or Sections 2062 and 2067 of the CDFG Code and are eligible for state listing. However, CNPS strongly recommends that these species be fully considered during the preparation of environmental documentation relating

[1] 16 U.S.C., Sec. 703, Supp. I, 1989.

to CEQA. This may be particularly appropriate for the type locality of a List 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates.

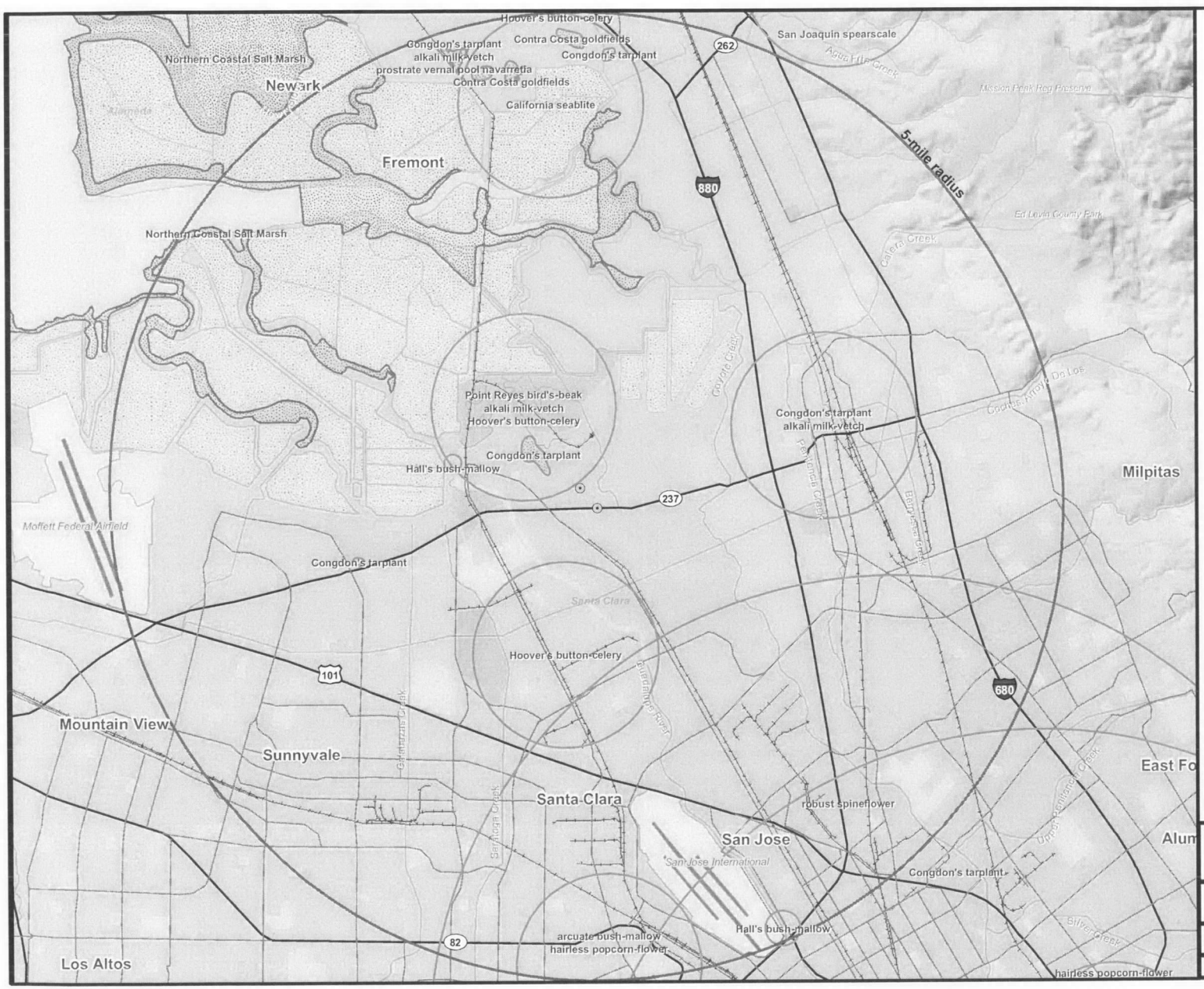
Special-status Plant Species

For purposes of this report, "special-status" plants are considered plant species that are:

- Listed under the FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under the CESA as threatened, endangered, rare, or a candidate species.
- Listed by the CNPS as rare or endangered on List 1A, 1B, or 2.
- Listed by the CNPS on List 3 or 4, but only 1) if the known populations of these species occurred in the vicinity of Santa Clara County; 2) if the species is recorded from fewer than two counties in California (*i.e.*, very limited distribution); 3) for populations at the periphery of a species' range or in areas where the taxon is especially uncommon or has sustained heavy losses; 4) for the type locality of a plant; or 5) for populations exhibiting unusual morphology or occurring on unusual substrates.

Reconnaissance-level botanical surveys were conducted on 26 June 2009 by plant ecologist Brian Cleary, M.S. for habitats capable of supporting special-status plant species. The survey method involved walking the entire study area looking for special-status plants and suitable habitat for these species. Prior to the field survey, a query of special-status plants in the CNDDB (2009) was performed for the USGS Milpitas topographical quadrangle in which the Project site occurs, as well as the eight quadrangles surrounding the Project site: Niles, Calaveras Reservoir, San Jose West, Mountain View, La Costa Valley, San Jose East, Cupertino and Newark (CNDDB 2009). Special-status plants occurring within a 5-mi radius of the Project site are shown in Figure 2 (CNDDB 2009). The CNPS Inventory (CNPS 2009) was then queried to produce a similar list for Santa Clara County. The habitat requirements of each special-status plant species were the principal criteria used for inclusion in the list of species potentially occurring on the site.

Many of the special-status plant species that occur in Santa Clara County are associated with habitat or soil types that did not occur on the Project site historically or no longer occur on the Project site due to the extensive land disturbance associated with past agricultural practices; such habitats and soil types that are absent from the Project site include serpentine soils, strongly alkaline soils, clay soils, vernal pool habitat, and cismontane woodland habitat. CNDDB (2009) records list nine species as occurring within 5 miles (mi) of the study area (Figure 2): brittlescale (*Atriplex depressa*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Contra Costa goldfields (*Lasthenia conjugens*), alkali milk-vetch (*Astragalus tener* var. *tener*), prostrate navarretia (*Navarretia prostrata*), Hoover's button-celery (*Eryngium aristulatum var. hooveri*), California seablight (*Suaeda californica*), arcuate bush mallow (*Malacathamnus arcuatus*), and Point Reyes bird's-beak (*Cordylanthus maritimus* ssp. *palustris*). Eight of these special-status species were rejected from consideration for occurrence in the study area due to the degraded



CNDDB Legend

Plants

- Specific Location
- Approximate Location
- General Area

Terrestrial Communities

- General Area
- Study Area Sites

N

0 1 2

Miles

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San Jose Municipal Water Line Project -
Biological Study: CNDDB Plant Records

Proj No. 3071-01	Date July 2009	Figure 2
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nature of habitat on the site, the lack of associated native species, and/or the absence of specific microhabitat variables such as soil type or hydrology (Appendix B). It was determined that only one species, Congdon's tarplant, could potentially occur on the site in its present condition. Congdon's tarplant was specifically searched for during our 26 June survey, which was conducted at a time of year appropriate for detecting the species if it was present. Congdon's tarplant was not detected on-site during this survey. Thus, Congdon's tarplant was determined to be absent from the site, and no additional surveys for this plant or other potential special-status plant species are warranted.

Special-status Animal Species

For purposes of this report, "special-status" animals are considered animal species that are:

- Listed under the FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under the CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFG as a California Species of Special Concern.
- Listed in the California Fish and Game Code as a fully protected species (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515).

Reconnaissance-level surveys of the Project site were conducted by wildlife ecologists N. Thorngate, M.S. and S. Rottenborn, Ph.D. on 24 and 26 June 2009, respectively. The entire site, plus areas within 250 ft of the site (for purposes of reconnaissance-level burrowing owl [*Athene cunicularia*] surveys) was walked while the observers searched for evidence of special-status species and suitable habitat for such species. Prior to these site visits, a query of special-status animals in the CNDDB (2009) was performed for the USGS Milpitas topographical quadrangle in which the Project site occurs, as well as the eight quadrangles surrounding the Project site. Special-status animals occurring within a 5-mi radius of the Project site are shown in Figure 3 (CNDDB 2009). The special-status animal species that occur in the vicinity in habitats similar to those found on the site are described below. The legal status and likelihood of occurrence of these species is presented in Table 1.

Locally occurring species that would be out of the known range at the site, for which habitat at the site is not suitable, or for which the lack of recent records in the site vicinity indicates absence include the vernal pool tadpole shrimp (*Lepidurus packardi*), longhorn fairy shrimp (*Branchinecta longiantenna*), vernal pool fairy shrimp (*Branchinecta lynchi*), Central California Coast steelhead (*Oncorhynchus mykiss*), fall/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Actinemys marmorata*), bald eagle (*Haliaeetus leucocephalus*), California clapper rail (*Rallus longirostris obsoletus*), California black rail (*Laterallus jamaicensis coturniculus*), California least tern (*Sterna antillarum browni*), western snowy plover (*Charadrius alexandrinus nivosus*), willow flycatcher (*Empidonax traillii*), San Francisco dusky-footed woodrat (*Neotoma fuscipes*

Table 1. Special-status Animal Species, Their Status, and Potential Occurrence at the San Jose Municipal Water Line Project Site.

NAME	*STATUS	HABITAT	POTENTIAL FOR OCCURRENCE ON-SITE
Federal or State Endangered or Threatened Species			
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Vernal pools and swales containing clear to highly turbid water.	Absent: No suitable habitat is present, only known population in the Bay Area is in the Warm Springs Seasonal Wetland in the Don Edwards San Francisco Bay National Wildlife Refuge.
Longhorn fairy shrimp (*Branchinecta longiantenna*)	FE	Vernal pools.	Absent: No suitable habitat on-site; outside of known range.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	ST	Vernal pools.	Absent: No suitable habitat on-site; outside of known range.
California Central Coast Steelhead (*Oncorhynchus mykiss*)	FT	An anadromous form of rainbow trout that migrates upstream from the Pacific or the S.F. Bay to spawn. Prefers streams with dense canopy and pools with cold-water temperatures.	Absent: No suitable habitat on-site.
California red-legged frog (*Rana aurora draytonii*)	FT, SP, CSSC	Streams, freshwater pools, and ponds with overhanging vegetation.	Absent: No suitable habitat on-site; considered extirpated from floor of Santa Clara Valley.
California tiger salamander (*Ambystoma californiense*)	FT, CSSC	Vernal or temporary pools in annual grasslands or open stages of woodlands.	Absent: No suitable habitat on-site.
Bald eagle (*Haliaeetus leucocephalus*)	SE, SP	Occurs mainly along seacoasts, rivers, and lakes; nests in tall trees or in cliffs. Feeds mostly on fish.	Absent: No suitable habitat on-site.
American peregrine falcon (*Falco peregrinus anatum*)	SE, SP	Breeds on cliffs; forages in virtually any habitat.	Potential: Could forage on or over the Project site on occasion, but no breeding habitat is present.
California clapper rail (*Rallus longirostris obsoletus*)	FE, SE, SP	Salt marsh habitat dominated by common pickleweed and cordgrass.	Absent: No suitable habitat on-site.
California black rail (*Laterallus jamaicensis coturniculus*)	ST, SP	Breeds in a variety of wetland types; in San Francisco Bay area, pickleweed marshes.	Absent: No suitable habitat on-site.
Western snowy plover (*Charadrius alexandrinus nivosus*)	FT, CSSC (nesting)	Sandy beaches on marine and estuarine shores.	Absent: No suitable habitat on-site.
California least tern (*Sterna antillarum browni*)	FE, SE, SP	Nests along the coast on bare or sparsely vegetated, flat substrates.	Absent: No suitable habitat on-site.
Willow flycatcher (*Empidonax traillii*)	SE FE (*extimus*)	Breeds in riparian habitats in mountains and southern deserts.	Absent: Although willow flycatchers are occasional migrants through the Project vicinity, those occurring on-site would be from populations outside of California, and would thus not considered special-status species.

NAME	*STATUS	HABITAT	POTENTIAL FOR OCCURRENCE ON-SITE
Bank swallow (*Riparia riparia*)	ST	Colonial nester on vertical banks or cliffs with fine-textured soils near water.	Potential: Rare migrant in Santa Clara County. Could forage on or over the Project site on occasion, but no breeding habitat is present.
Salt marsh harvest mouse (*Reithrodontomys raviventris*)	FE, SE	Salt marsh habitat dominated by common pickleweed.	Absent: No suitable habitat on-site.
California Species of Special Concern			
Fall/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*)	CSSC	Cool streams that reach the ocean and that have shallow, partly shaded pools, riffles, and runs.	Absent: No suitable habitat on-site.
Foothill yellow-legged frog (*Rana boylii*)	CSSC	Rocky streams in a variety of habitats. Found in coast ranges.	Absent: No suitable habitat on-site; considered extirpated from floor of Santa Clara Valley.
Western pond turtle (*Actinemys marmorata*)	CSSC	Permanent or nearly permanent water in a variety of habitats.	Absent: No suitable habitat on-site.
Northern harrier (*Circus cyaneus*)	CSSC	Forages in marshes, grasslands, and ruderal habitats; nests in extensive marshes, wet fields, and grasslands.	Potential: Suitable foraging habitat present on the Project site; could potentially nest in wetlands off-site to the east of the Project site.
Vaux's swift (*Chaetura vauxi*)	CSSC	Nests in snags in coastal coniferous forests or occasionally in chimneys; forages aerially.	Potential: No suitable breeding habitat occurs on the Project site, but nonbreeders may forage over Project site.
Long-eared owl (*Asio otus*)	CSSC	Riparian habitats dominated by dense willows, cottonwoods, or live oaks; forages in open areas.	Potential: No suitable breeding habitat occurs on the Project site, but nonbreeders may forage on Project site on rare occasions.
Short-eared owl (*Asio flammeus*)	CSSC	Nests on ground in tall emergent vegetation or grasses; forages over a variety of open habitats.	Potential: No suitable breeding habitat occurs on the Project site, but nonbreeders may forage on Project site on rare occasions.
Burrowing owl (*Athene cunicularia*)	CSSC	Grasslands and ruderal habitats.	Potential: Suitable foraging habitat, as well as burrows suitable for nesting and roosting, present on-site. Owls have been observed in adjacent grasslands.
Loggerhead shrike (*Lanius ludovicianus*)	CSSC	Nests in tall shrubs and dense trees, forages in grasslands, marshes, and ruderal habitats.	Potential: Suitable foraging habitat exists within the Project site, and suitable breeding habitat is present in trees immediately adjacent to the study area.
Yellow warbler (*Dendroica petechia*)	CSSC	Breeds in riparian woodlands, particularly those dominated by willows and cottonwoods.	Potential: No suitable breeding habitat occurs on the Project site, but individual migrants may occasionally forage in the pines, eucalyptus, and other trees adjacent to the Project area.
San Francisco common yellowthroat (*Geothlypis trichas sinuosa*)	CSSC	Found in fresh to salt water marshes and associated upland areas in the Bay Area.	Potential: No suitable breeding habitat occurs on the Project site, but nonbreeding dispersants may occasionally forage in vegetation on or adjacent to the Project site
Yellow-breasted chat (*Icteria virens*)	CSSC	Breeds in riparian habitats having dense understory vegetation, such as willow and blackberry.	Potential: No suitable breeding habitat occurs on the Project site, but individual migrants may occasionally forage in the pines, eucalyptus, and other trees adjacent to the Project area.

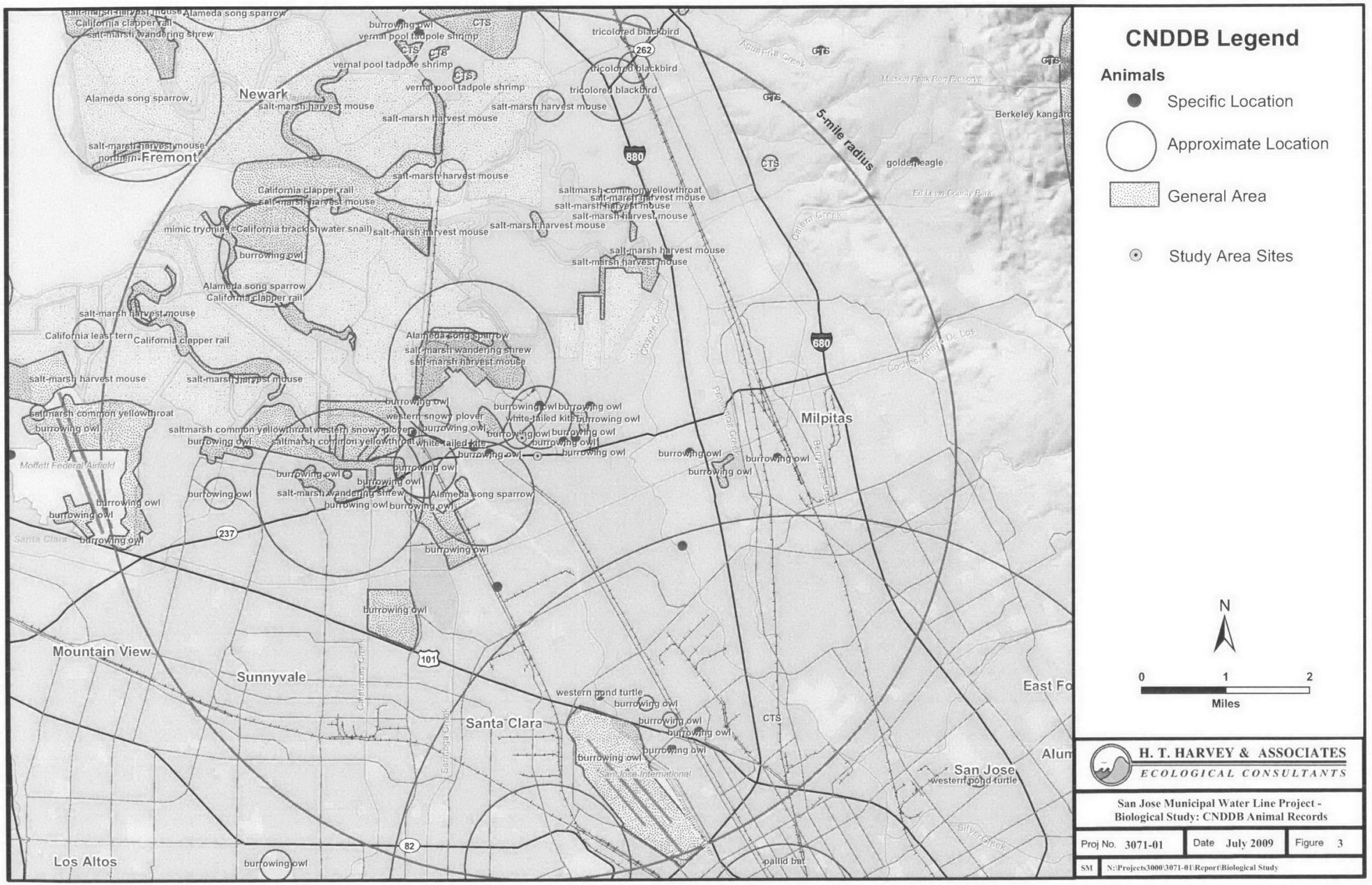
NAME	*STATUS	HABITAT	POTENTIAL FOR OCCURRENCE ON-SITE
Tricolored blackbird (*Agelaius tricolor*)	CSSC	Breeds near fresh water in dense emergent vegetation.	Potential: No suitable breeding habitat occurs on or adjacent to the Project site, but nonbreeders may occasionally forage in the Project area.
Townsend's big-eared bat (*Corynorhinus townsendii*)	CSSC	Roosts in caves and mine tunnels in a variety of habitats.	Absent: No roosting habitat observed on the site and no recent records of nearby colonies.
Western mastiff bat (*Eumops perotis*)	CSC	Found in central and south coastal California. Roosts primarily in cliffs or high buildings.	Absent: No suitable habitat on-site.
Pallid bat (*Antrozous pallidus*)	CSSC	Forages over many habitats; roosts in buildings, rocky outcrops and crevices, trees, and mines and caves.	Potential: Limited marginal roosting habitat in the Project area; may forage in the Project area.
Salt marsh wandering shrew (*Sorex vagrans halicoetes*)	CSSC	Medium high marsh 6-8 ft above sea level with abundant driftwood and pickleweed.	Absent: No suitable habitat on-site.
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	CSSC	Found in a variety of woodland and brushland habitats and is association with hardwoods.	Absent: No suitable habitat on-site.
American badger (*Taxidea taxus*)	CSSC	Found in a variety of grassland habitats, usually in association with burrowing mammals, their primary prey.	Absent: No dens observed on-site; no records known from adjacent areas. Grassland area is likely not large enough to accommodate home range size.
State Protected Species or CNPS Species			
White-tailed Kite (*Elanus leucurus*)	SP	Nests in tall shrubs and trees; forages in grasslands, marshes, and ruderal habitats.	Potential: Suitable foraging habitat exists within the Project site, and suitable breeding habitat is present in trees immediately adjacent to the study area.
Golden eagle (*Aquila chrysaetos*)	SP	Breeds on cliffs or in large trees or electrical towers; forages in large open areas.	Potential: Could forage on or over the Project site on occasion, but no breeding habitat is present.

SPECIAL STATUS SPECIES CODE DESIGNATIONS

FE = Federally listed Endangered
FT = Federally listed Threatened
SE = State listed Endangered
CSSC = California Species of Special Concern
SP = State Protected Species

DEFINITIONS REGARDING POTENTIAL OCCURRENCE

Present: Species or sign of their presence observed on the site
Likely: Species or sign not observed on the site, but reasonably certain to occur on the site
Possible: Species or sign not observed on the site, but conditions suitable for occurrence
Unlikely: Species or sign not observed on the site, conditions marginal for occurrence
Absent: Species or sign not observed on the site, conditions unsuitable for occurrence


CNDDB Legend
Animals
Specific Location
Approximate Location
General Area
Study Area Sites
5-mile radius
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Miles
Newark
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Milpitas
Mountain View
Sunnyvale
Santa Clara
San Jose
Los Altos
Alameda song sparrow
California clapper rail
salt-marsh wandering shrew
salt-marsh harvest mouse
burrowing owl
vernal pool tadpole shrimp
tricolored blackbird
mimic tryonia (=California brackish water snail)
California least tern
saltmarsh common yellowthroat
western snowy plover
white-tailed kite
golden eagle
Berkeley kangaroo
western pond turtle
pallid bat
CTS
880
680
237
101
82
262
H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS
San Jose Municipal Water Line Project -
Biological Study: CNDDB Animal Records
Proj No. 3071-01
Date July 2009
Figure 3
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annectens), salt marsh harvest mouse (*Reithrodontomys raviventris*), salt marsh wandering shrew (*Sorex vagrans halicoetes*), American badger (*Taxidea taxus*), western mastiff bat (*Eumops perotis*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Several special-status species may occur on the site rarely, or only as occasional foragers, but are not expected to breed on or very near the site, and would not be affected by Project implementation. These species include the American peregrine falcon (*Falco peregrinus anatum*), golden eagle (*Aquila chrysaetos*), Vaux's swift (*Chaetura vauxi*), long-eared owl (*Asio otus*), short-eared owl (*Asio flammeus*), bank swallow (*Riparia riparia*), yellow warbler (*Dendroica petechia*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), yellow-breasted chat (*Icteria virens*), tricolored blackbird (*Agelaius tricolor*), and pallid bat (*Antrozous pallidus*).

Expanded discussions are provided below for the special-status animal species that could breed on or very near the site and that could thus potentially be affected by the Project more than through the temporary loss of or disturbance to a small amount of foraging habitat.

White-tailed Kite (*Elanus leucurus*). Federal Listing Status: None; State Listing Status: Fully Protected. The white-tailed kite ranges throughout the western states and Florida where suitable habitat occurs. In California, white-tailed kites can be found in the Central Valley and along the coast, in grasslands, agricultural fields, cismontane woodlands, and other open habitats (Polite *et al.* 1990, Dunk 1995, Erichsen *et al.* 1996). White-tailed kites are year-round residents of the state, establishing breeding territories that encompass open areas with healthy prey populations, and snags, shrubs, trees, or other nesting substrates (Dunk 1995). Nonbreeding birds typically remain in the same area over the winter, although some movements do occur (Polite *et al.* 1990). The presence of white-tailed kites is closely tied to the presence of prey species, particularly voles, and prey base may be the most important factor in determining habitat quality for white-tailed kites (Dunk and Cooper 1994, Skonieczny and Dunk 1997). White-tailed kites have been observed foraging on WPCP lands near the Project area, and the ruderal/non-native annual grassland in the portion of the Project site near Nortech Parkway and on the north side of SR 237 provides suitable foraging habitat for the species. Although no suitable nesting habitat is present within the Project footprint, up to one pair could potentially nest in the ornamental pine and eucalyptus trees bordering the northern portion of the Project site.

Northern Harrier (*Circus cyaneus*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The California distribution of this widespread raptor includes the Central Valley, most of the immediate coast, northeastern California, and the eastern slope of the Sierra Nevada. While the distribution of harriers in California has remained stable over time, overall abundance has declined, probably largely due to loss, fragmentation, and degradation of nesting habitat, as well as disturbance at nest sites (Davis and Niemela 2008). Harriers occur year-round in California, in open wetlands, marshes, meadows, grasslands, pastures, croplands, and riparian woodlands. Ideal habitat features large tracts of undisturbed habitat dominated by thick vegetation suitable for nest construction and concealment (Macwhirter and Bildstein 1996), with ample lookout and plucking perches (Davis and Niemela 2008). Harriers breed from March through mid-September, constructing their nests on the ground in dense, tall vegetation. They forage on small birds, mammals, and other small vertebrates. Northern harriers are fairly common foragers on WPCP lands, and the

ruderal/non-native annual grassland in the portion of the Project site near Nortech Parkway and on the north side of SR 237 provides suitable foraging habitat for the species. Although no suitable nesting habitat is present within the Project footprint, wetlands off-site to the northeast of the bore pit location on the north side of SR 237 could potentially support up to one nesting pair.

Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern. Western burrowing owls can be found in grassland habitats throughout western and Midwestern North America (Haug *et al.* 1993). In California burrowing owls are distributed throughout the state, with populations in the northeast; in the Central Valley, interior San Francisco Bay Area, and Salinas Valley; on the Carrizo Plain and in the Imperial Valley; and on several of the Channel Islands. Habitat loss has reduced the abundance of this species within its range and resulted in local extirpations, particularly along the central and southern coasts (Gervais *et al.* 2008). California hosts both migratory and sedentary populations of burrowing owls. These owls favor flat, open grassland or gentle slopes and sparse shrubland ecosystems for breeding, through they will also readily colonize agricultural fields and other developed areas (Conway *et al.* 2006). Mammal burrows, or other structures that mimic burrows, provide secure nesting locations and nonbreeding refuges and are a fundamental ecological requirement of burrowing owls; in California, owls are most often found in close association with California ground squirrel burrows (Rosenberg *et al.* 2007). Ideal habitat for burrowing owls is comprised of annual and perennial grasslands with low vegetation height, sparse or nonexistent tree or shrub cover, and an abundance of mammal burrows (Coulombe 1971, Haug and Oliphant 1990, Plumpton and Lutz 1993). The nesting season as recognized by the California Department of Fish and Game (1995) runs from February 1 through August 31. After nesting is completed, adult owls may remain in their nesting burrows or in nearby burrows, or may migrate; young birds disperse across the landscape, from 0.2 km to 53 km from their natal burrows (Rosier *et al.* 2006, Rosenberg *et al.* 2007).

Burrowing owls have long been present in the vicinity of the Arzino Ranch, located northwest of the northern portion of the Project area. Protocol-level surveys for burrowing owls conducted during early April 2008 on a larger portion of the WPCP lands that include the northern portion of the Project area detected burrowing owls, though none were found within the study area for the San Jose Municipal Water Line Project (H. T. Harvey & Associates 2007). Reconnaissance-level surveys conducted for the water line Project in June 2009 did not detect any burrowing owls, nor any signs of their presence, on or within 250 ft of Project areas, though these surveys determined that suitable nesting, roosting, and foraging habitat for burrowing owls is present within the Project area. California ground squirrel burrows are present at low densities within the footprint of the northern portion of the Project site (*i.e.*, in the 700-ft long segment south of Nortech Parkway) and within 250 ft of the proposed bore pit location on the north side of SR 237, and there is some potential for burrowing owls to use such burrows in the future. No suitable burrows for owls are present in the portion of the study area south of SR 237.

Loggerhead Shrike (*Lanius ludovicianus*). Federal Listing Status: None; State Listing Status: Species of Special Concern (Nesting). The loggerhead shrike is distributed throughout much of California, except in higher-elevation and heavily forested areas including the Coast Ranges, the Sierra Nevada, the southern Cascades, the Klamath and Siskiou ranges, and the highest parts of the Transverse Ranges. While the species range in California has remained stable over time, populations

have declined steadily (Cade and Woods 1997, Humple 2008). Loggerhead shrikes establish breeding territories in open habitats with relatively short vegetation that allows for visibility of prey; they can be found in grasslands, scrub habitats, riparian areas, other open woodlands, ruderal habitats, and developed areas including golf courses and agricultural fields (Yosef 1996). They require the presence of structures for impaling their prey; these most often take the form of thorny or sharp-stemmed shrubs, or barbed wire. Ideal breeding habitat for loggerhead shrikes is comprised of short grass habitat with many perches, shrubs or trees for nesting, and sharp branches or barbed wire fences for impaling prey. Shrikes nest earlier than most other passerines, especially in the west where populations are sedentary. The breeding season may begin as early as late February, and lasts through July. Nests are typically established in shrubs and low trees including sagebrush, willow, and mesquite, through brush piles may also be used when shrubs are not available (Yosef 1996, Humple 2008). Loss and degradation of breeding habitat, as well as possible negative impacts of pesticides, are considered to be the major contributors to the population declines exhibited by this species (Cade and Woods 1997, Humple 2008). The ruderal/non-native annual grassland habitat throughout the Project area provides suitable foraging habitat for shrikes. Although there are no trees or shrubs suitable for nesting within the Project footprint itself, the trees immediately adjacent to the two portions of the Project site north of SR 237 could be used by nesting shrikes, and one to two pairs could potentially nest in the vicinity.

IDENTIFICATION OF SENSITIVE AND REGULATED HABITATS

Waters of the United States/Waters of the State

Regulations Overview. Areas meeting the regulatory definition of "Waters of the U.S." (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U.S.," tributaries of waters otherwise defined as "Waters of the U. S.," the territorial seas, and wetlands (termed Special Aquatic Sites) adjacent to "Waters of the U.S." (33 CFR, Part 328, Section 328.3). Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must be in compliance with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The State Water Resources Control Board is the state agency (together with the Regional Water Quality Control Boards [RWQCB]) charged with implementing water quality certification in California.

Survey Results. Potential USACE-jurisdictional seasonal wetlands were identified in three areas on-site. A wetland depression at the northern end of the Nortech Parkway portion of the Project area appears to have been created recently as a result of a leaking irrigation line and is thus considered a man-induced wetland. During our 26 June site visit, personnel from the landscaping firm working for the business park adjacent to the northern portion of the Project area confirmed that the irrigation line had been leaking, and that it was scheduled to be fixed soon. This depression was not identified as possessing wetland characteristics during wetland delineation field work performed in September 2006 and January, February, and March 2007 as part of our investigation of the WPCP lands for a separate project (H. T. Harvey & Associates 2007), further indicating that this wetland has formed recently as a result of artificial hydrology. The USACE ordinarily does not regulate wetlands that are supported entirely by such artificial sources of hydrology, especially after the artificial hydrology is discontinued. As a result, the USACE may or may not take jurisdiction over this wetland.

A second wetland located very close to the proposed bore pit on the north side of SR 237 this appears to be somewhat well established as a result of annual precipitation that moves toward this area of low ground, though it may also be supported at least in part by a leaking irrigation line, as a small amount of standing water was observed in a hole adjacent to the cattails and parking lot during our 26 June survey. It appears that this topographic depression may have been constructed to retain irrigation water and excess rainfall surface flows off of the adjacent parking lot. As a result, the USACE may or may not take jurisdiction over this wetland.

The third wetland is located just north of SR 237 and east of the fence marking the WPCP property line; this wetland, which is a fairly large wetland previously delineated by H. T. Harvey & Associates for a separate project, extends southwestward into the study area for the current Project. We expect the USACE to take jurisdiction over this wetland. The two drainage ditches located along the north and south shoulders of SR 237 support only small patches of non-native upland vegetation, and these features are not expected to fall within the jurisdiction of the USACE.

State Water Resources Control Board Jurisdiction

The RWQCB is responsible for protecting surface, ground, and coastal waters within its boundaries, pursuant to the Porter-Cologne Water Quality Control Act of the California Water Code. The RWQCB has both federal and state jurisdiction under Section 401 of the Clean Water Act, for activities that could result in a discharge of dredged or fill material to a water body. Federal authority is exercised whenever a proposed project requires a Clean Water Act Section 404 permit from the USACE in the form of a Section 401 Water Quality Certification. State authority is exercised when a proposed project is not subject to federal authority, in the form of a Notice of Coverage, Waiver of Waste Discharge Requirements. Many wetlands fall into RWQCB jurisdiction, including some wetlands that are not subject to USACE jurisdiction. RWQCB jurisdiction of other waters, such as streams and lakes, extends below the ordinary high water mark.

The RWQCB has no formal technical manual or expanded regulations to help in identifying their jurisdiction. The only guidance can be found in Porter-Cologne Water Quality Control Act,

Chapter 2 (Definitions), which states "'waters of the State' means any surface water or ground water, including saline waters, within the boundaries of the state."

Survey Results. On the Project site, all wetland habitats regardless of USACE jurisdiction (*i.e.*, even if disclaimed by the USACE) are to be considered waters of the State. In our opinion, there are no other areas that should be considered Waters of the State on the Project site (subject to concurrence by the RWQCB) outside of the wetlands described above.

Habitats Regulated Under Fish and Game Code Section 1600 *et seq.*

Activities that result in the diversion or obstruction of the natural flow of a stream, or substantially change its bed, channel or bank, or utilize any materials (including vegetation) from the streambed require that the applicant enter into a Streambed Alteration Agreement with CDFG, under sections 1600-1603 of the California Fish and Game Code. The CDFG potentially extends the definition of stream to include "intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams mapped on USGS quads, and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife" (CDFG 1994).

Survey Results. Based on past experience working with CDFG representatives in similar habitats to those encountered on-site, it is our determination that the CDFG is not likely to claim jurisdiction over any features on the site.

BIOTIC RESOURCE IMPACTS AND MITIGATION

The proposed Project will affect the biological resources of the site. The California Environmental Quality Act (CEQA) and the CEQA Guidelines provide direction in evaluating project impacts and determining which impacts will be significant (Remy *et al.* 1999). CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under CEQA Guidelines section 15065 (Mandatory Findings of Significance), a project's effects on biotic resources are deemed significant where the project would:

- "substantially reduce the habitat of a fish or wildlife species"
- "cause a fish or wildlife population to drop below self-sustaining levels"
- "threaten to eliminate a plant or animal community"
- "reduce the number or restrict the range of an endangered, threatened, or rare species"

In addition to the section 15065 criteria that trigger mandatory findings of significance, Appendix G of the CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

- "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"
- "have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service"
- "have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means"
- "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"
- "conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance"
- "conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan."

Our impact analysis is based on the following assumptions from our understanding of the proposed Project:

1. All impacts, including construction staging and access, will occur within the areas described under *PROJECT DESCRIPTION* above.
2. All areas disturbed by the installation of the water pipeline will be restored to preconstruction contours and will be allowed to revert back to ruderal/non-native annual grassland habitat (with the exception of the area south of SR 237, which may be developed by another project), thus avoiding any permanent loss of habitat as a result of this Project.

The following section addresses potential impacts to biotic resources resulting from the proposed Project.

IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

Temporary Impacts to Wetlands and Associated Species

The Project may include minor temporary impacts to seasonal wetlands associated with construction and installation of the waterline, including jack-and-bore activities near the seasonal wetlands on the north side of SR 237, and within the wetlands along the fence line near the end of Nortech Parkway. As stated above, the wetlands at the end of Nortech Parkway have been created as a result of a leaking irrigation line and thus are considered man-induced wetlands. Additionally, the wetlands supporting cattails and tall umbrella sedge close to the jack-and-bore pit on the north side of SR 237 may also be supported by artificial hydrology as a result of a second leaking irrigation line. Each of the three small patches of seasonal wetlands within the study area exhibit relatively low habitat quality, and two of the wetlands are dominated by non-native, facultative wetland species. Further, following temporary impacts associated with the installation of the waterline, Project areas will be restored to preconstruction contours. We do not expect the Project to result in permanent changes to hydrology supporting these wetlands, and thus we expect any wetlands within the impact areas to be restored naturally following the completion of construction. Furthermore, no sensitive wetland-associated species are associated with the wetlands within the Project area, and thus impacts to any species using these wetlands will be to common, regionally widespread species. The wetlands on the site support at most a very small proportion of the regional populations of these species, and thus, the Project's impacts do not meet the CEQA standard of having a *substantial* adverse effect on populations of these species. Therefore, temporary impacts to these low-quality wetlands and associated species are judged to be less than significant. Nevertheless, if these wetlands are determined to be jurisdictional by the USACE, and if impacts to these wetlands cannot be avoided during construction, permits from the USACE and RWQCB will be required.

Temporary Impacts to Ruderal/Non-native Annual Grassland and Associated Species

The Project will result in temporary impacts to ruderal/non-native annual grassland during construction. This habitat type is regionally abundant, and restoration of the construction area to preconstruction contours will allow this habitat type to restore naturally following construction. As a result, there will be no permanent loss of this habitat. With the exception of the species noted in the impact sections below, the majority of wildlife species associated with this habitat

are regionally abundant. The ruderal/non-native annual grassland habitats on the site support at most a very small proportion of the regional populations of these species, and thus, the Project's impacts do not meet the CEQA standard of having a *substantial* adverse effect on populations of these species. Therefore, temporary impacts to ruderal/non-native grasslands and associated species are judged to be less than significant.

Potential Impacts to Nesting Special-status Birds

Although the white-tailed kite, northern harrier, and loggerhead shrike are not expected to nest within the Project footprint, up to one pair of kites and two pairs of shrikes could nest in trees adjacent to the portion of the Project near Nortech Parkway or near the jack-and-bore area north of SR 237. In addition, it is possible that the wetlands northeast of the jack-and-bore area north of SR 237 could support a pair of nesting northern harriers. Project construction will result in the temporary disturbance of potential foraging habitat for these species. However, given the ample foraging habitat available elsewhere in the vicinity (*e.g.*, on other WPCP lands) and the expectation that the seasonal wetlands and ruderal/non-native annual grassland habitat will restore naturally following construction, such temporary habitat disturbance will not substantially affect these species.

Project activities could potentially cause abandonment of active nests of these species if noise, ground vibrations, and the movement of people and equipment in close proximity to nests (*i.e.*, within 250 ft of a nest) occurs during the breeding season (roughly, 1 February through 31 August). Regional breeding populations of these species are relatively small, however the proposed Project is not expected to disturb more than one pair of kites and harriers and two pairs of shrikes, which would not constitute a substantial negative effect on the regional populations of these species. Therefore this impact is considered to be less than significant. However, these species are protected by federal and state regulations including the National Migratory Bird treaty Act and the California Fish and Game Code (see section below entitled *Compliance with Additional Laws and Regulations*).

SIGNIFICANT IMPACTS THAT CAN BE MITIGATED TO A LESS-THAN-SIGNIFICANT LEVEL

Potential Impacts to Burrowing Owls

Our June 2009 reconnaissance-level surveys did not detect any evidence of burrowing owls on or within 250 ft of the Project site, and none were detected in these areas during protocol-level surveys conducted in 2007 for an unrelated project (H. T. Harvey & Associates 2007). However, burrowing owls are known to occur in the vicinity, the site provides suitable foraging habitat, and numerous ground squirrel burrows on and within 250 ft of the site provide potential roosting and/or nesting sites for the species. As a result, burrowing owls could use the site, and could move into burrows on or near the site prior to construction.

A small amount of suitable foraging, roosting, and nesting habitat for this species will be temporarily impacted by the Project. Because the area to be impacted is so limited in extent compared to habitat available elsewhere in the vicinity (*e.g.*, on other WPCP lands), and because

the ruderal/non-native annual grassland habitat will restore naturally following construction, such temporary habitat disturbance will not substantially affect this species.

However, if owls are present within the Project area during construction, excavation or side-casting of soil and movement of heavy equipment could potentially trap owls inside their burrows, resulting in injury or mortality of individuals. Construction activity could also cause owls to abandon burrows that are adjacent to (*i.e.*, within 250 ft of) the Project area; abandonment of active nests during the breeding season (1 February to 31 August) could result in the loss of eggs or young. Because burrowing owl populations are declining throughout much of their range in the United States, and particularly within the South Bay region, any impacts from the Project that result in the injury or mortality of individual owls or active nests, such as excavation or grading, or project-related disturbance that results in the abandonment of eggs or nestlings, would be considered significant. Implementation of Mitigation Measure 1a, in combination with Measures 1b and 1c if necessary, would reduce impacts to less than significant levels.

Mitigation Measure 1a. Pre-construction Surveys. Surveys for burrowing owls should be conducted in potential habitat in conformance with the CDFG protocol prior to the start of any ground-disturbing construction activity. These surveys should be initiated no more than 30 days prior to the start of construction, and the final site visit should take place no more than 14 days prior to the start of construction. If no burrowing owls are located during these surveys, no additional action would be warranted. If these surveys detect burrowing owls on or within 250 feet of the site, then the following mitigation measures will be implemented.

Mitigation Measure 1b. Buffer Zones. If burrowing owls are present during the breeding season (generally 1 February to 31 August), a 250-ft buffer, within which no Project-related activity will be permissible, will be maintained between construction activities and occupied burrows. Owls present at burrows on the site after 1 February will be assumed to be nesting on or adjacent to the site unless evidence indicates otherwise. This protected area will remain in effect until 31 August or, based upon monitoring evidence, until the young owls are foraging independently. If burrowing owls are present adjacent to, but not within, the Project's disturbance footprint, then during the nonbreeding season a buffer of 150 ft is desirable; however, as long as the owl's burrow is located far enough from the construction area that the burrow occupied by the owl is not in danger of being destroyed or caved-in, then a lesser buffer is acceptable during the nonbreeding season (1 September to 31 January).

Mitigation Measure 1c. Relocation. If ground-disturbing activities will occur close enough to an active burrow that the burrow is at risk of being destroyed, any owl(s) occupying the burrow should be evicted during the non-breeding season to avoid impacts to the bird(s). No burrowing owls should be evicted from burrows during the nesting season (1 February through 31 August) unless evidence indicates that nesting is not actively occurring (*e.g.*, because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season). As noted in Measure 1b above, owls will not be relocated during the nonbreeding season unless the occupied burrow is at risk of being destroyed.

COMPLIANCE WITH ADDITIONAL LAWS AND REGULATIONS

REGULATORY OVERVIEW FOR BIRDS

The Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, a violation of the MBTA.

California State Fish & Game Code

Migratory birds are also protected in and by the state of California. The State Fish and Game Code §3503 (and other sections and subsections) emulates the MBTA and protects birds' nests and eggs from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG and would constitute a significant impact.

Raptors (*i.e.*, eagles, hawks, and owls) and their nests are specifically protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Project Applicability

The vast majority of birds found on the Project site are protected under the MBTA and State Fish and Game Code. Project construction during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests. This type of impact was determined to be less than significant under CEQA for all species potentially occurring on the Project site except for the burrowing owl, due to their local and regional abundance and/or the low magnitude of the potential impact. Nevertheless, we recommend that the following measures be implemented to reduce the risk of a violation of the MBTA and the California Fish and Game Code.

Compliance Measures

Measure 1. Avoidance. Avoid nesting-season construction. Construction should be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the Project area extends from 1 February through 31 August.

Measure 2. Pre-construction/Pre-disturbance Surveys. If it is not possible to schedule construction between 1 September and 31 January, then pre-construction surveys for nesting

birds should be conducted by a qualified ornithologist to ensure that no nests will be disturbed during Project implementation. This survey should be conducted no more than 7 days prior to the initiation of construction activities during the early part of the breeding season (February through May) and no more than 14 days prior to the initiation of these activities during the late part of the breeding season (June through August). During this survey, the ornithologist will inspect all potential nesting habitats in the Project area for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 250 ft for raptors and 50-100 ft for other species), to ensure that no nests of species protected by the MBTA or State Code will be disturbed during Project implementation.

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APPENDIX A.
SPECIAL-STATUS PLANT SPECIES
CONSIDERED BUT REJECTED FOR OCCURRENCE

Appendix A. Special-status Plant Species Considered but Rejected for Occurrence on the City of San Jose Municipal Water Line Project Site.

Scientific Name	Common Name	Lack of Serpentine Soils	Lack of Other Edaphic Requirements	Believed to Be Extirpated or Extinct	Outside of the Elevation Range	Lack of Associated Species	Highly Degraded Site Conditions
Astragalus tener var. *tener*	alkali milk-vetch		X			X	X
Atriplex depressa	brittlescale		X			X	X
Cordylanthus maritimus ssp. *palustris*	Point Reyes bird's-beak		X			X	X
Eryngium aristulatum var. *hooveri*	Hoover's button-celery		X			X	X
Lasthenia conjugens	Contra Costa goldfields		X			X	X
Malacothamnus arcuatus	Arcuate bush mallow		X			X	X
Navarretia prostrata	prostrate navarretia		X			X	X
Suaeda californica	California seablite		X	X		X	X

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

SAN JOSE MUNICIPAL WATER LINE PROJECT
SANTA CLARA COUNTY, CALIFORNIA
PRELIMINARY DELINEATION OF WETLANDS AND OTHER WATERS

Prepared by:

H. T. HARVEY & ASSOCIATES

Prepared for:

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17 July 2009

Project # 3071-01

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Patrick Boursier, Ph.D., Senior Plant Ecologist
Brian Cleary, M.S., Plant Ecologist

EXECUTIVE SUMMARY

H. T. Harvey & Associates plant ecologist Brian Cleary, M.S. surveyed the San Jose Municipal Water Line project site for areas that may meet the regulatory jurisdiction of Waters of the U.S. (jurisdictional waters). The purpose of this work was to identify the extent and distribution of current Section 404 jurisdictional waters located within the boundaries of the study area under conditions existing at the time of the survey.

The proposed project would entail the installation of approximately 1,000 linear feet (ft) of 12-inch water line in Alviso, Santa Clara County, California. A 700-ft segment would be installed on San Jose-Santa Clara Water Pollution Control Plant (WPCP) lands beginning at the end of Nortech Parkway and extending southward at a distance approximately 10 ft east of the adjacent office park property line; a strip extending 60 ft east of this property line would be used for water line installation, staging, and access. A 300-ft segment would start between SR 237 and the southeastern-most office park on Baytech Drive and would be installed by means of jack and bore encased in a steel pipe crossing beneath State Route (SR) 237. The northern terminus of this segment would be located approximately 5 ft west of the fence marking the WPCP property line, while the southern terminus would be located near Holger Way on the south side of SR 237. Jack and bore pits and staging/access areas would extend up to 50 ft west of the WPCP property line fence, and may extend slightly east of the fence as well.

Potential jurisdictional waters and areas determined to be non-jurisdictional are summarized in the table below. Current potential Section 404 jurisdictional waters totaled approximately 0.020 acres of wetlands. The study area does not include other waters of the U.S. We also identified approximately 0.048 acres of wetland comprising a single wetland feature supported by artificial (man-induced) hydrology within the study area. As a part of this submittal we are requesting that the U.S. Army Corps of Engineers review the information contained in this report and consider at least one of the wetland features for disclaimer based upon the physical evidence of artificial hydrology. The remaining upland areas (1.364 acres) met none of potential jurisdictional waters criteria.

Summary of Jurisdictional Waters

Potential Jurisdictional Waters	Acres
Wetlands	0.020
Other Waters	0.000
Jurisdictional Areas Total	**0.020**
Areas Meeting the Technical Criteria of Jurisdictional Waters (including Wetlands) Supported by Artificial Hydrology	0.048
Upland	1.364
Total Area of Study Site	**1.432**

INTRODUCTION

PROJECT AREA DESCRIPTION

The City of San Jose Municipal Water Line project study area includes three segments of land, two of which are located along the west and southwest property boundaries of the San Jose-Santa Clara Water Pollution Control Plant (WPCP) buffer lands bordered by State Route (SR) 237 to the south and an office park development to the north and west, respectively (Figure 1). The third segment of the study area is located directly adjacent to the south side of SR 237.

The proposed project would entail the installation of approximately 1,000 linear feet (ft) of 12-inch water line in Alviso, Santa Clara County, California. A 700-ft segment would be installed on San Jose-Santa Clara Water Pollution Control Plant (WPCP) lands beginning at the end of Nortech Parkway and extending southward at a distance approximately 10 ft east of the adjacent office park property line; a strip extending 60 ft east of this property line would be used for water line installation, staging, and access. A 300-ft segment would start between SR 237 and the southeastern-most office park on Baytech Drive and would be installed by means of jack-and-bore encased in a steel pipe crossing beneath State Route (SR) 237. The northern terminus of this segment would be located approximately 5 ft west of the fence marking the WPCP property line, while the southern terminus would be located near Holger Way on the south side of SR 237. Jack and bore pits and staging/access areas would extend up to 50 ft west of the WPCP property line fence, and may extend slightly east of the fence as well.

Much of the two portions of the study area located on the WPCP lands were historically farmed; during that time, disking occurred 2-3 times per year, depending on the weed growth between spring and summer. The majority of the site has been extensively disturbed as a result of historical farming and is now dominated by non-native upland grassland habitat that is currently grazed with sheep.

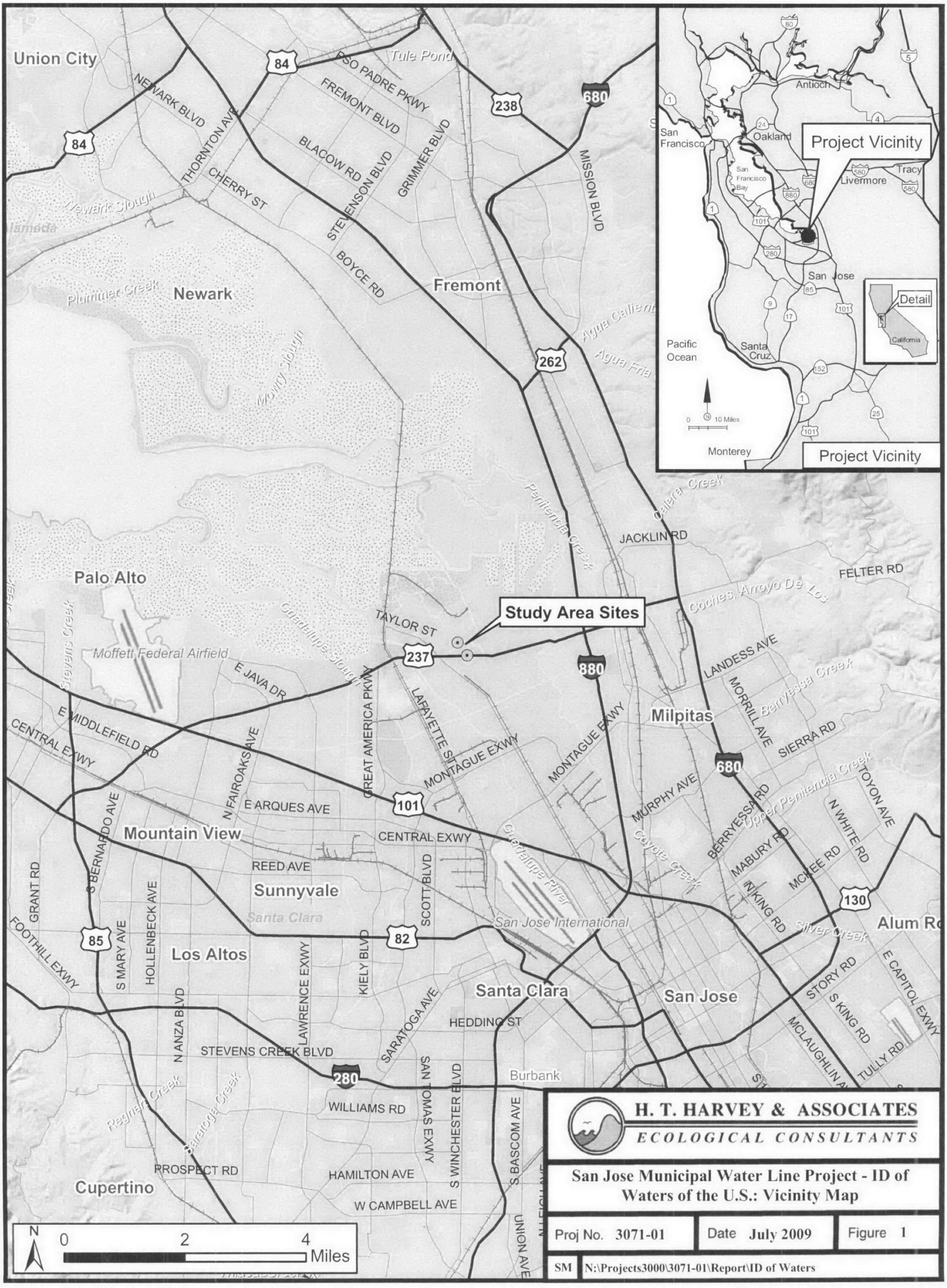
The site is located on the Milpitas USGS quadrangle map and is situated at an elevation of 0.4-10.5 ft above mean sea level (MSL) (Figure 2). Average annual precipitation of the site is approximately 16 inches and the average annual temperature is 59 degrees Fahrenheit (Soil Conservation Service [SCS] 1968).

A single soil type identified as Willows clay slightly alkali soil is found within the study area. The Willows clay slightly alkali soil series consist of fine textured, poorly drained soils underlain by sedimentary alluvium, formed in low level positions on alluvial plains (SCS 1968). Willows clay slightly alkali soils are included on the hydric soils list for Santa Clara County (SCS 1986).

The National Wetland Inventory (NWI) depicts a single wetland type within the study area: palustrine emergent, temporarily flooded (U.S. Fish & Wildlife Service 1985; Figure 4). It is important to note that substantial changes to the surface hydrology of the region have occurred since this mapping was conducted by the U.S. Fish & Wildlife Service in 1985. Therefore, the wetland designation no longer represents current conditions within the study area.

SURVEY PURPOSE

H. T. Harvey & Associates plant ecologist Brian Cleary, M.S., surveyed the project limits for areas that may meet the regulatory definition of Waters of the United States (jurisdictional waters). The delineation covered a 1.432-acre study area. The purpose of this work was to identify the extent and distribution of potential jurisdictional waters, such as wetlands and other waters of the U.S., occurring within the study area boundaries under conditions existing at the time of the survey.



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San Jose Municipal Water Line Project - ID of Waters of the U.S.: Vicinity Map

Proj No. 3071-01	Date July 2009	Figure 1
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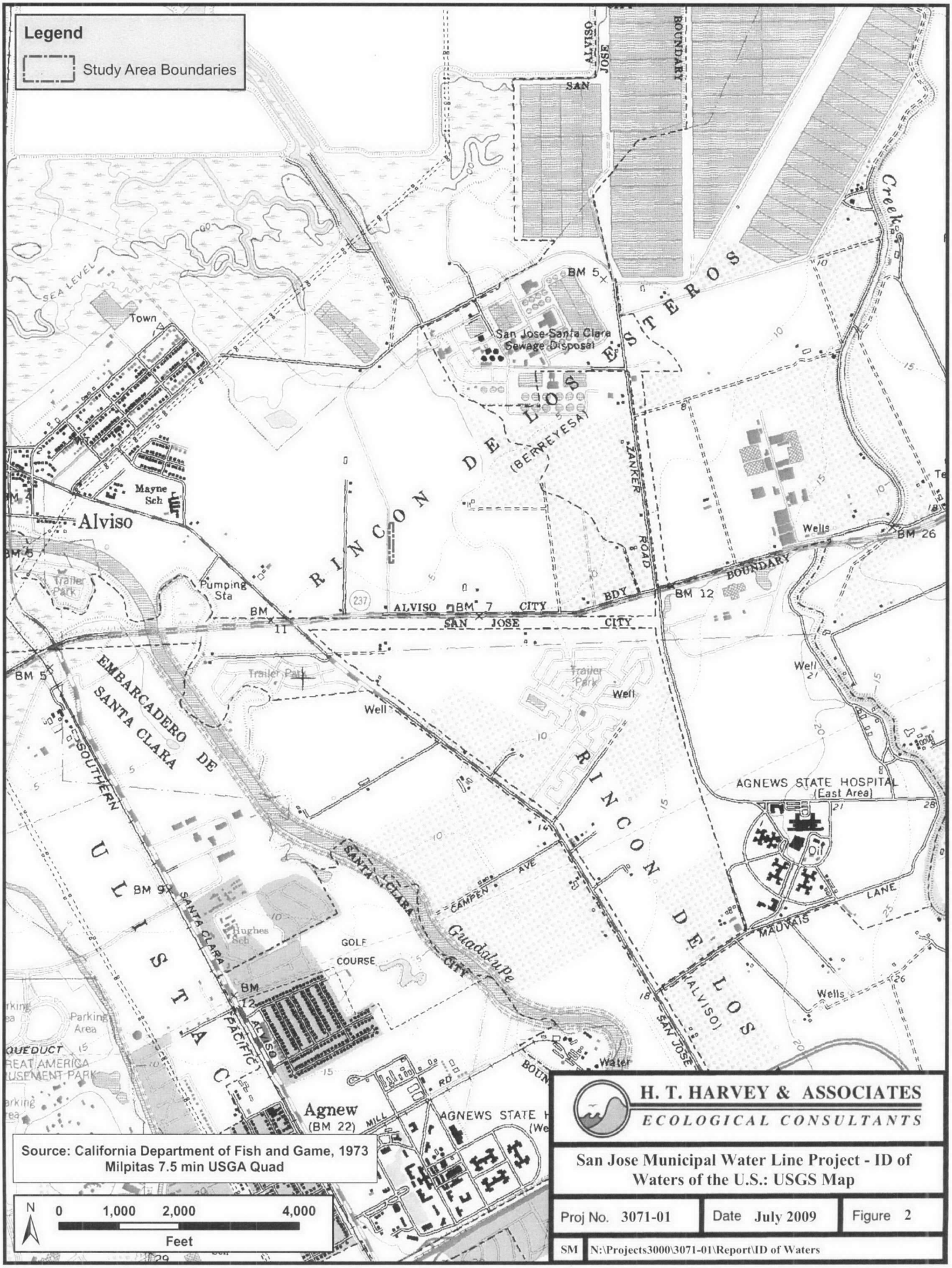

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San Jose Municipal Water Line Project - ID of Waters of the U.S.: USGS Map

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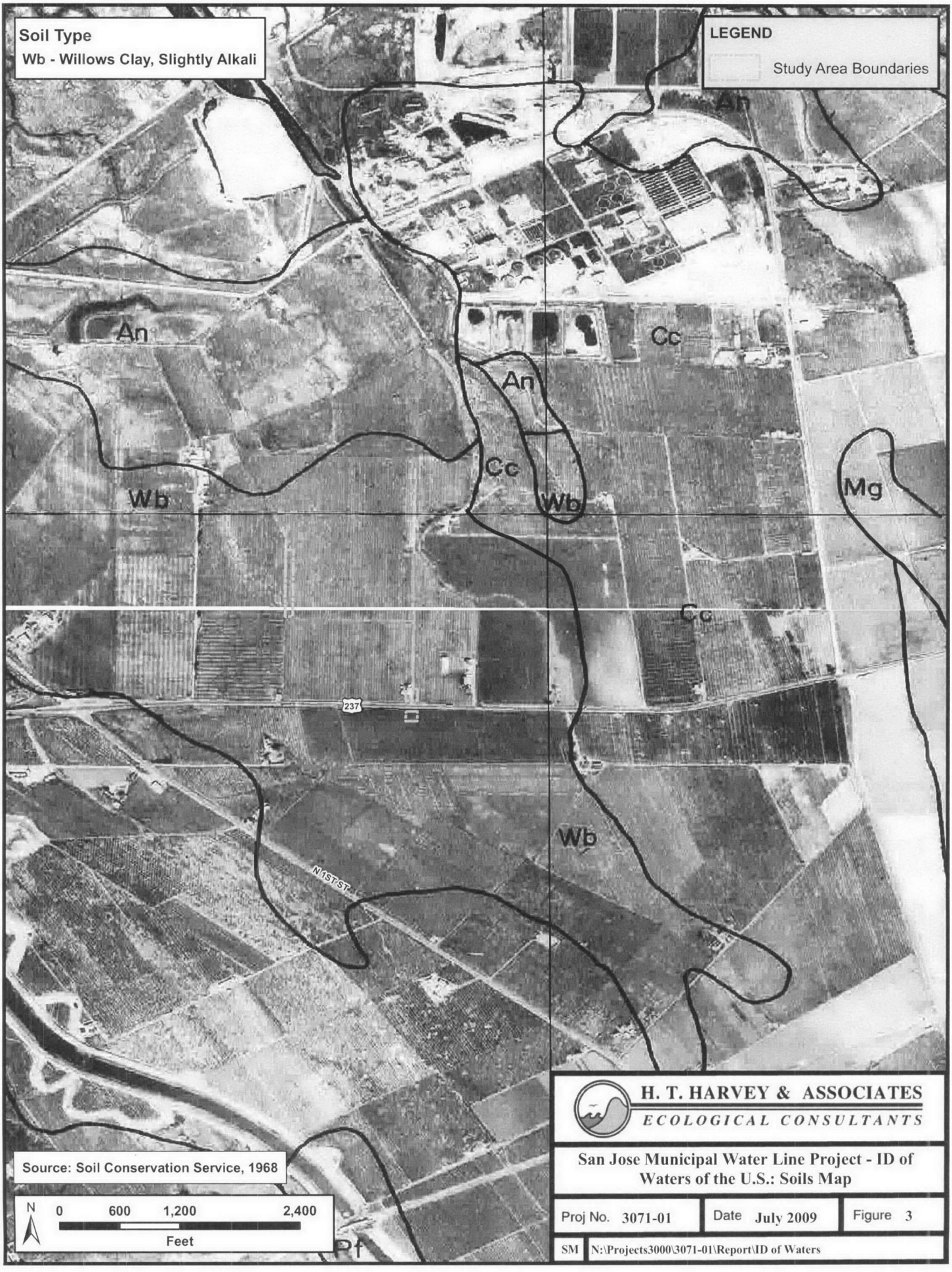

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San Jose Municipal Water Line Project - ID of Waters of the U.S.: Soils Map

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San Jose Municipal Water Line Project - ID of Waters of the U.S. National Wetlands Inventory Map

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SURVEY METHODS

IDENTIFICATION OF JURISDICTIONAL WATERS OVERVIEW

Surveys for potential jurisdictional waters were conducted within the study area on 26 June 2009 using methodologies approved by the U.S. Army Corps of Engineers (USACE). All work was conducted following the procedures outlined in *Information Needed for Verification of Corps Jurisdiction* prepared by the San Francisco District of the USACE (2000). Information obtained during our 26 June 2009 survey was supplemented by the results of wetland delineation field work performed in September 2006 and January, February, and March 2007 as part of our investigation of the WPCP lands for a separate project (H. T. Harvey & Associates 2007); the study area for that previous delineation work included all of the 700-ft long segment of proposed water line near Nortech Parkway, as well as the WPCP lands immediately north of SR 237, which comprise a portion of that segment of the water line Project.

Generally, surveys conducted on non-disturbed sites examine the vegetation, soils, and hydrology using the "Routine Determination Method, On-Site Inspection Necessary (Section D)" outlined in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987). This multi-parameter approach to identifying wetlands is based upon the presence of hydrophytic vegetation, hydric soils and wetland hydrology. In addition, the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Regional Supplement; USACE 2006) was followed to document site conditions relative to hydrophytic vegetation, hydric soils and wetland hydrology. The Regional Supplement is designed to be used with the current version of the USACE Manual; where differences in the two documents occur, the Regional Supplement takes precedence over the USACE 1987 Manual.

Alternatively, upland sites (non-wetlands) which subsequently developed some characteristics of wetlands, due to intentional or incidental human activities, are examined for wetlands using the techniques described in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987) for "Atypical Situations: Man-Induced Wetlands" (Part IV, Section F, Subsection 4). The Regional Supplement (USACE 2006) also describes the methodology to be followed on such sites under *Difficult Wetland Situations in the Arid West*, Chapter 5. An example of an atypical situation is "man-induced" wetlands created by purposeful or incidental impoundment of water, which lack hydric soil indicators. The majority of such wetlands involve a significant change in the hydrologic regime, which may either increase or decrease the wetness of an area.

Prior to site surveys, topographic maps and aerial photographs of the study area were obtained from several sources and reviewed. These sources included the U. S. Geological Survey Maps and National Wetlands Inventory Maps for the Milpitas quadrangle and aerial photographs obtained from the U.S. Department of Agriculture National Agricultural Image Program (2005 photographs).

A brief overview of the USACE regulations specifically applicable to the identification of jurisdictional waters in the survey area is summarized below.

WATERS OF THE U.S. REGULATIONS OVERVIEW

Areas meeting the regulatory definition of "Waters of the United States" are subject to the regulatory jurisdiction of the USACE. The USACE, under provisions of Section 404 of the Clean Water Act (1972), has jurisdiction over "Waters of the United States" (jurisdictional waters). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U.S.," tributaries of waters otherwise defined as "Waters of the U.S.," the territorial seas, and wetlands adjacent to "Waters of the U.S." (33 CFR, Part 328, Section 328.3).

Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

Below we provide a detailed description of the methodology used in the identification of jurisdictional waters, having the potential of occurring on site, including Section 404 jurisdictional wetlands and other waters.

IDENTIFICATION OF SECTION 404 WETLANDS AND OTHER WATERS

Surveys were conducted within the project boundaries for areas that meet the technical criteria of jurisdictional wetlands. The vegetation, soils, and hydrology of the site were examined following the guidelines outlined in the "Routine Determination Method" and "Atypical Situations: Man-Induced Wetlands" in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement (USACE 2006).

The project site was examined for topographic features, drainages, alterations to site hydrology and areas of significant recent disturbance. A determination was then made as to whether normal environmental conditions were present at the time of the field surveys. Data were used to document which portions of the site were wetlands.

Vegetation

Plants observed at each of the sample sites were identified to species using *The Jepson Manual* (Hickman 1993). The wetland indicator status of each species was obtained from the 1988 Wetland Plant List, California (Reed 1988). The names of plants were generally not taken from *The Jepson Manual* (Hickman 1993) as these names are not totally consistent with scientific names used in the 1988 Wetland Plant List, California (Reed 1988) and the National List of Scientific Plant Names (Smithsonian Institution 1982).

A list of species for each observation area was then compiled and a visual estimate of the percent cover of plant species was made following guidance provided in the *Regional Supplement.* It was then determined which of the observation areas supported wetland vegetation using the

applicable Indicator (*i.e.*, 1-Dominance Test; 2-Prevalence Test; or, 3-Morphological Adaptations) as described in the *Regional Supplement.*

Wetland indicator species are designated according to their frequency of occurrence in wetlands. For instance, a species with a presumed frequency of occurrence of 67 to 99 percent in wetlands is designated a facultative wetland indicator species. The five basic levels of wetland indicator status described in the *Regional Supplement* do not include plus (+) or minus (-) indicators. The wetland indicator groups, indicator symbol and the frequency of occurrence of species within them in wetlands are as follows:

Table 1. Wetland Indicator Status Categories for Vascular Plants.*

INDICATOR CATEGORY	SYMBOL	FREQUENCY OF OCCURRENCE
OBLIGATE	OBL	greater than 99%
FACULTATIVE WETLAND	FACW	67 - 99%
FACULTATIVE	FAC	34 - 66%
FACULTATIVE UPLAND	FACU	1 - 33%
UPLAND	UPL	less than 1%

*Based upon information contained in *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Obligate and facultative wetland indicator species are hydrophytes that occur "in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present" (Environmental Laboratory 1987). Facultative indicator species may be considered wetland indicator species when found growing in hydric soils that experience periodic saturation. A complete list of the vascular plants observed within the survey area, and their current indicator status has been provided in Appendix A. Plants species that are not on the regional list of wetland indicator species are upland species.

Soils

Where possible, the top 22 inches of the soil profile were examined for hydric soil indicators. Diagnostic features include numerous indicators defined and described by the National Technical Committee for Hydric Soils (NTCHS). These indicators include the presence of organic soils (Histosols, A1), histic epipedons (A2), depleted matrix (F3), redox depressions (F8), redox dark surface (F6), and mottling indicated by the presence of gleyed or bright spots of colors (in the former case, blue grays; in the latter case, orange red, or red brown) within the soil horizons observed, among other features. Mottling of soils usually indicates poor aeration and lack of good drainage. Munsell Soil Notations (Kollmorgen Instruments Corp. 1990) were recorded for the soil matrix for each soil sample. The last digit of the Munsell Soil Notation refers to the chroma of the sample. This notation consists of numbers beginning with 0 for neutral grays and increasing at equal intervals to a maximum of about 20. Chroma values of the soil matrix that are 1 or less, or 2 or less when mottling is present, are typical of soils which have developed under anaerobic conditions. The first digit of the Munsell Soil notation refers to the value of the sample, with numbers beginning from 2 for saturated colors to a maximum of about 8 for faded or light colors. Hydric soils often show low value colors when soils have accumulated sufficient

organic material to indicate development under wetland conditions, but can show high value colors when iron depletion has occurred, removing color value from the soil matrix.

In sandy soils, such as alluvial deposits in the bottom of drainage channels, hydric soil indicators include high organic matter content in the surface horizon (Sandy Mucky Mineral, S1) and streaking of subsurface horizons by organic matter (A5). In some cases, as described in the *Arid West Regional Supplement* (USACE 2006), coarse soils can be naturally problematic when recently deposited in floodplains or channels. These soils can lack certain features of hydric soils that require several years to develop, such as a low value and low chroma from a build-up of organic material coating the coarse grains. All soil colors indicated in this report were taken under clear, sunny skies using moistened soil samples.

The Soil Survey of Santa Clara County, California (SCS 1968) was consulted to determine which soil types have been mapped on the project site. The list of hydric soils in Santa Clara County is included in Appendix B (SCS 1986).

Hydrology

Each of the sample sites was examined for positive field indicators (primary and secondary) of wetland hydrology following the guidance provided in the *Regional Supplement.* Such indicators might include visual observation of inundation (A1) and/or soil saturation (A3), watermarks (B1), drift lines (B3), water-borne sediment deposits (B2), water-stained leaves (B9), and drainage patterns within wetlands (B10).

Identification of Other Waters

In concert with the USACE's efforts to revise the wetland delineation manuals, making them more specific to different geographic regions of the United States, as described above, efforts have been initiated by the USACE to develop an "ordinary high water" (OHW) delineation manual. In particular, two relatively recent publications have attempted to further refine the definition of OHW in the arid west (including California):

- *Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States* (USACE 2004), and;
- *Review and Synopsis of Natural and Human Controls on Fluvial Channel Processes in the Arid West* (USACE 2007).

In addition, *Regulatory Guidance Letter 05-05* (dated: 7 December 2005) deals specifically with the topic of ordinary high water mark identification. That publication lists the following physical characteristics that should be considered when making an OHW mark determination: (1) natural line impressed on the bank, (2) shelving, (3) changes in the character of the soil, (4) destruction of terrestrial vegetation, (5) wracking, (6) vegetation matted down, bent, or absent, (7) sediment sorting, (8) leaf litter disturbed or washed away, (9) scour, (10) deposition, (11) multiple observed flow events, (12) bed and banks, (13) water staining, (14) and change in plant community.

For purposes of the current study, the identification of the "ordinary high water" mark in the field was based upon observation of a suite of natural geomorphic field indicators that have formed during channel forming events. These features included: bank shelving, sediment deposition, scour holes, staining of rocks and culverts, change in soil particle size distribution, exposed roots, flattened vegetation, evidence of a clear rack line of floating debris (*i.e.*, accumulation of a tight and compressed line of branches, dead leaves stepped channel bed morphology, scour holes downstream of obstructions, among other factors. The presence of one or more of the natural geomorphic field indicators listed above, taking into consideration such factors as size of watershed, channel slope, landscape setting, elevation, gradient, land use practices, and soil type, were taken as direct evidence of an OHW mark and such channels were identified as "other waters."

SURVEY RESULTS

Potential Section 404 jurisdictional waters identified within the 1.432-acre City of San Jose Municipal Water Line study area boundaries included a total of 0.020 acres of wetlands (Figure 5). Other waters of the U.S. are not present within the study area. We also identified approximately 0.048 acres of wetland comprised of a single wetland feature supported by artificial hydrology. Artificial hydrology likely supports a second wetland feature, as discussed below. Potential jurisdictional waters and areas supported by artificial hydrology are summarized below. As a part of this submittal, we are requesting that the USACE review the information contained in this report and consider the potentially non-jurisdictional wetland for disclaimer based upon the physical evidence of artificial hydrology supporting this wetland feature. The remaining areas within the study area boundaries (approximately 1.364 acres) met none of the regulatory definitions of jurisdictional waters. A total of four sample points were taken within the study area (Appendix C).

Table 2. Summary of Jurisdictional Waters

Potential Jurisdictional Waters	Acres
Wetlands	0.020
Other Waters	0.000
Jurisdictional Areas Total	**0.020**
Areas Meeting the Technical Criteria of Jurisdictional Waters (including Wetlands) Supported by Artificial Hydrology	0.480
Upland	1.364
Total Area of Study Site	**1.432**

Information pertinent to the identification of jurisdictional waters assembled during the investigations is presented in four appendices attached to the rear of this report.

- Appendix A — Plant List
- Appendix B — Soil Descriptions
- Appendix C — USACE Data Forms
- Appendix D — Color Photos

OBSERVATIONS / RATIONALE APPROACH / ASSUMPTIONS

- This wetland delineation was performed according to the "Routine Method of Determination" utilizing three parameters, as outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement (USACE 2006). In addition, the Regional Supplement (USACE 2006) was followed to document site conditions relative to hydrophytic vegetation, hydric soils and wetland hydrology. Normal conditions were assumed.
- As described above, a total of approximately 0.020 acres of potential waters of the U.S. including two separate wetlands (*i.e.*, two delineated wetland polygons) were identified

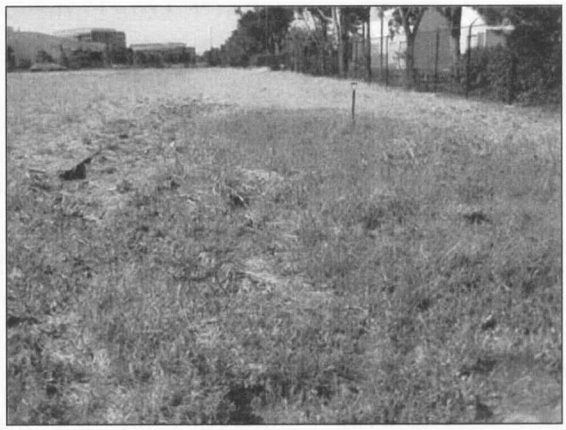
within the south segment of the study area boundaries (Figure 5). The first wetland (see Photograph 1) is dominated by narrow-leaved cattail (*Typha angustifolia*) located between SR 237 and the southeastern-most office park on Baytech Drive, extending from approximately 30 to 50 ft west of the property line (Photograph 1; Sample Point 2A, Appendix C). It appears that this topographic depression may have been constructed to retain irrigation water and excess rainfall surface flows off of the adjacent parking lot. Although this wetland appears to be somewhat well established, a potential leaking irrigation line associated with the adjacent office park complex may also contribute artificial hydrology to this wetland.

Photograph 1. East view of wetlands located between SR 237 and the southeastern-most office park on Baytech Drive (26 June 2009).

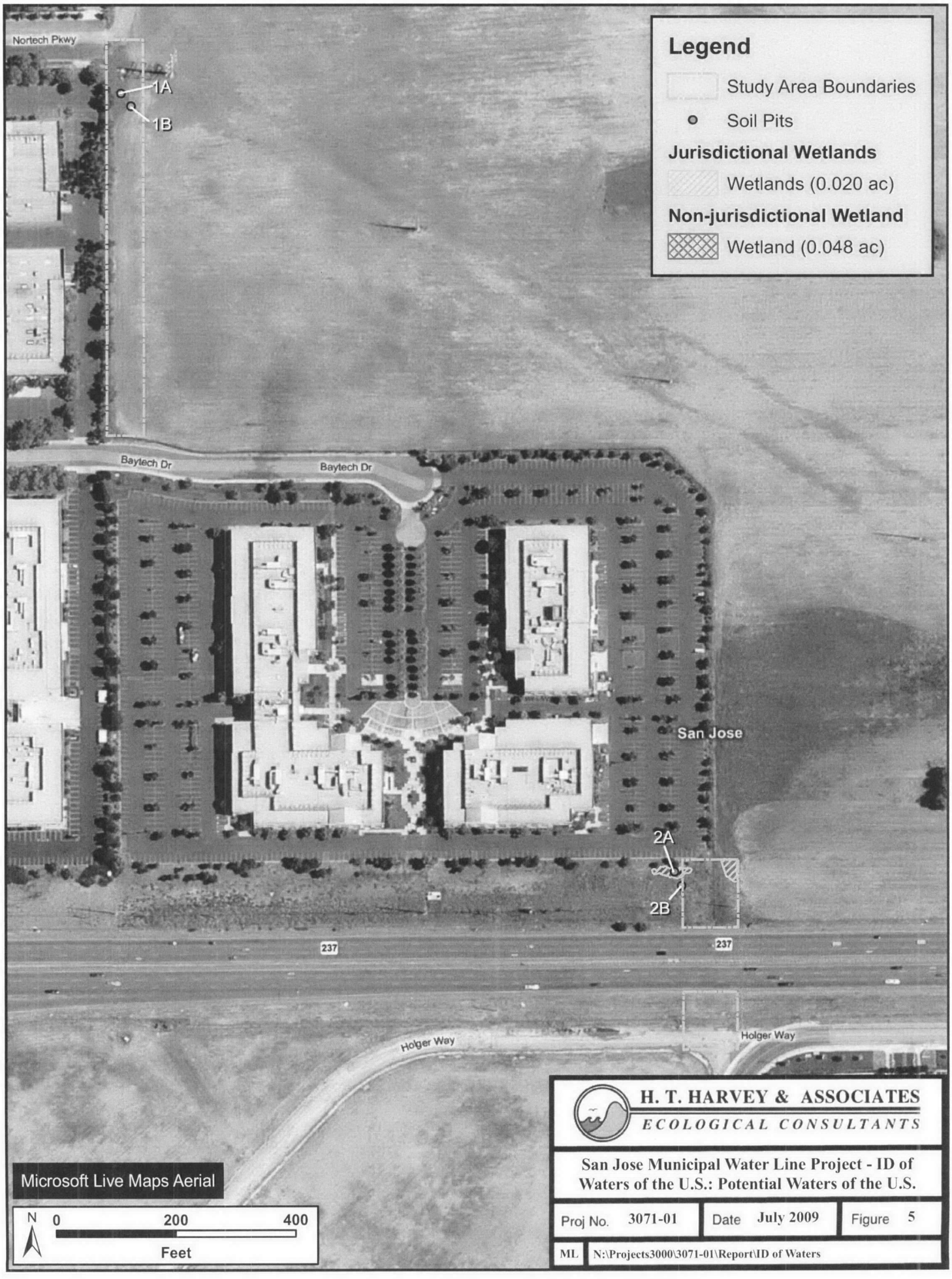
Photograph 2. North view of a wetland located in the southeastern-most corner of the survey boundary (March 2007).

- The second wetland (see Photograph 2) is located on WPCP lands on the east side of the property line in near proximity to the first cattail wetland (Figure 5). Please note: Photograph 2 shows the condition of this wetland area during the winter rainfall period of 2007. We include this photo to demonstrate the contribution of incident rainfall to the persistence of hydrophytic vegetation. This wetland is situated within a shallow topographic depression that supports a preponderance of disturbance-oriented non-native and native hydrophytic plant species including curly dock (*Rumex crispus*), bristly ox-tongue (*Picris echioides*), hyssop loosestrife (*Lythrum hyssopifolium*), annual beard grass (*Polypogon monspeliensis*) and toad rush (*Juncus bufonius* ssp. *bufonius*) (Photograph 2). The wetland on WPCP lands was mapped by H. T. Harvey & Associates in 2007 as a part of another wetland delineation project.

- A wetland measuring approximately 0.048 acres in size which is located at the northern end of the Nortech Parkway portion of the study area (see Photograph 3) was determined to be entirely maintained by man-induced hydrology (Figure 5). This wetland feature occurs as a result of a leaking irrigation line associated with the business park complex directly adjacent to



Photograph 3. South view of a man-induced wetland supported by a leaking irrigation line offsite (26 June 2009).



H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

San Jose Municipal Water Line Project - ID of Waters of the U.S.: Potential Waters of the U.S.

Proj No. 3071-01	Date July 2009	Figure 5
ML	N:\Projects3000\3071-01\Report\ID of Waters	

the west side of the study area (Photograph 3; Sample Point 1A, Appendix C); according to personnel of the landscaping firm working on this business park, the leak is scheduled to be fixed in the near future. Water escaping from the line appears to flood the wetland area for prolonged periods, long enough to support a predominance of non-native and native hydrophytic plant species including bristly ox-tongue, Italian ryegrass (*Lolium multiflorum*), curly dock (*Rumex crispus*), annual beard grass, common spikerush (*Eleocharis macrostachya*) and Himalayan blackberry (*Rubus discolor*). This depression was not identified as possessing wetland characteristics during wetland delineation field work performed in September 2006 and January, February, and March 2007 as part of our investigation of the WPCP lands for a separate project, further indicating that this wetland has formed recently as a result of artificial hydrology. We believe that repair of the irrigation line would eliminate the hydrology sufficient to convert the existing wetlands to upland grassland habitat.

- No other waters of the U.S. were identified within the boundaries of the project site.

AREAS MEETING THE REGULATORY DEFINITION OF JURISDICTIONAL WATERS

A) Identification of Section 404 Potential Jurisdictional Wetlands (Special Aquatic Sites)

Potential Section 404 jurisdictional wetlands (approximately 0.020 acres) were identified within the study area (Figure 5). These included a cattail wetland located on the north side of SR 237 between the existing business complex parking lot and SR 237, and a second wetland also located in the southern section of the study area on WPCP lands, just north of SR 237.

Vegetation. Dominant hydrophytic vegetation in wetlands included narrow-leaved cattail (*Typha angustifolia*; OBL), tall umbrella sedge (*Cyperus eragrostis*; FACW), bristly ox-tongue (*Picris echioides*; FAC), hyssop loosetrife (*Lythrum hyssopifolium;* FACW), Italian rye grass (*Lolium multiflorum*; FAC) and curly dock (*Rumex crispus*; FACW) (Sample Point 1A; Appendix C).

Hydrology. Primary hydrology was observed in Sample Point 2A in wetlands located in the southern section of the study area that included soil saturation (USACE wetland hydrology indicator A3) (Appendix C).

Soils. The Willows clay, slightly alkali hydric soils were encountered in each of the 4 Soil Sample Points 1A, 1B, 2A and 2B (Figure 5). Hydric soil indicators identified in the upper soil profile included reduced low chroma soils of 10YR 3/1 (USACE hydric soil indicator F3) (Appendix C).

B) Identification of Other Waters

No other waters of the U.S were identified on site.

AREAS NOT MEETING THE REGULATORY DEFINITION OF JURISDICTIONAL WATERS

As stated above an artificial wetland approximately 0.048 acres in size located at the northern end of the Nortech Parkway portion of the study area was determined to potentially fall outside of the jurisdiction of the USACE based on the presence of man-induced hydrology (Figure 5).

The wetland occurs as a result of a leaking irrigation line that regularly floods this portion of the study area. Soil Sample Point 1A documents the presence of the artificial wetlands (Appendix C). We believe that repair of the irrigation line would convert the existing wetland to upland grassland habitat.

The remaining areas within the boundaries of the project site (approximately 1.364 acres) met none of the regulatory definitions of jurisdictional waters. Of the four Sample Points recorded on site, two were taken within upland habitats (Sample Points 1B and 2B, Appendix C). The upland grassland Sample Points are dominated by non-native grasses and forbs including black mustard (*Brassica nigra*; NOL), slender oat (*Avena barbata*; NOL), rip-gut brome (*Bromus diandrus*; NOL), California burclover (*Medicago polymorpha*; NOL) and wild lettuce (*Lactuca serriola*; NOL). No evidence of wetland hydrology, such as inundation, saturation, sediment deposits, or drainage patterns in wetlands was observed in the majority of the upland area of non-native grassland habitat.

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APPENDIX A.

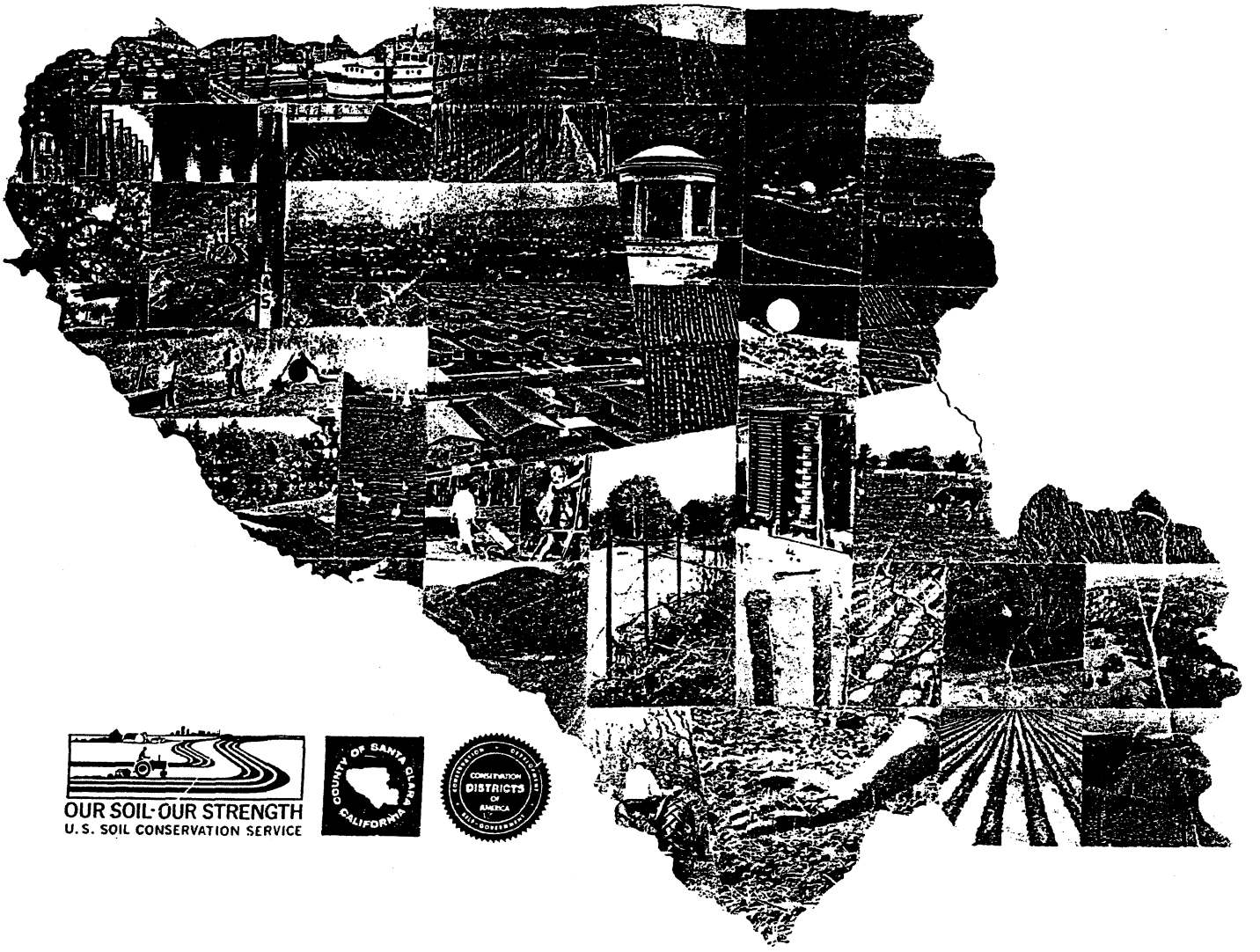
PLANTS OBSERVED

Appendix A. Wetland Indicators Status for Plants Observed at the San Jose Municipal Water Line Project Site, Santa Clara County, California.			
FAMILY NAME	**SCIENTIFIC NAME**	**COMMON NAME**	**INDICATOR STATUS**
Apiaceae	*Conium maculatum*	poison hemlock	FACW
	Foeniculum vulgare	sweet fennel	FACU
Asteraceae	*Lactuca serriola*	prickly lettuce	FAC
	Matricaria matricarioides	pineapple weed	NOL
	Picris echioides	bristly ox-tongue	FAC
	Sonchus oleraceus	common sow thistle	NI
	Xanthium strumarium	rough cocklebur	FAC
Brassicaceae	*Brassica nigra*	black mustard	NOL
Caryophyllaceae	*Cerastium arvense*	field chickweed	FACU
	Stellaria media	common chickweed	FACU
Chenopodiaceae	*Beta vulgaris*	beet	FACU
Convolvulaceae	*Convolvulus arvensis*	field bindweed	NOL
Cyperaceae	*Cyperus eragrostis*	tall umbrella sedge	FACW
	Eleocharis macrostachya	common spikerush	OBL
Fabaceae	*Medicago polymorpha*	California burclover	NOL
	Melilotus officinalis	yellow sweetclover	FACU
	Vicia sativa	common vetch	FACU
Geraniaceae	*Erodium botrys*	wide-leaf filaree	NOL
	Geranium molle	dove's-foot geranium	NOL
Juncaceae	*Juncus bufonius* var. *bufonius*	toad rush	FACW
Lythraceae	*Lythrum hyssopifolium*	hyssop loosestrife	FACW
Malvaceae	*Malva parviflora*	cheeseweed	NOL
Onagraceae	*Epilobium* sp.	willow herb	---
Poaceae	*Avena sativa*	cultivated oat	NOL
	Bromus diandrus	ripgut grass	NOL
	Cynodon dactylon	Bermuda grass	FAC
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	FAC
	Lolium multiflorum	Italian ryegrass	FAC
	Poa annua	annual bluegrass	FACW
	Polypogon monspeliensis	annual beard grass	FACW
Polygonaceae	*Rumex crispus*	curly dock	FACW
Portulacaceae	*Calandrinia ciliata*	red maids	NOL
Rosaceae	*Rubus discolor*	Himalayan blackberry	FACW
Typhaceae	*Typha angustifolia*	narrow-leaved cattail	OBL
The species are arranged alphabetically by family name for all vascular plants encountered during the plant survey. Plants are also listed alphabetically within each family. In some cases it was not possible to accurately identify a particular plant to the species level due to the absence of specific anatomic structures required for identification.			

APPENDIX B.

SOILS

SOILS OF SANTA CLARA COUNTY



OUR SOIL-OUR STRENGTH
U.S. SOIL CONSERVATION SERVICE

Prepared by the United States Department of Agriculture, Soil Conservation Service, in cooperation with and for the County of Santa Clara Planning Department, the Santa Clara County Flood Control and Water District, and the Black Mountain, Evergreen, and Loma Prieta Soil Conservation Districts.

5 percent and 10 percent Gaviota rocky loam. Also included, along drainageways were slopes that range up to 45 percent; a few areas of gray, moderately alkaline soil, and areas that are over 4 feet deep to soft serpentinized shale.

This well drained soil has moderate fertility and holds about 2 to 4 inches of water for plant use. Subsoil permeability is slow. Surface runoff is medium and the erosion hazard is moderate. Rooting depth is generally shallow to bedrock.

This soil is used for dryland pasture and range. Vegetative cover is mostly grasses and forbs with scattered oak trees. The surface soil over most of the area is crusted from being trampled by livestock. Capability unit VIe1 (15); pasture and range site Shallow Loamy.

Vallecitos loam, 30 to 50 percent slopes (VaF). This soil occupies steep uplands with about 40 percent average slope. Texture of the surface soil is a loam or clay loam. Runoff is rapid and erosion hazard is high. Otherwise, this soil is similar to Vallecitos loam, 15 to 30 percent slopes, eroded. Included in mapping are areas of 10 percent Los Gatos gravelly loam; 5 percent Gaviota rocky loam and areas of moderate to severe sheet and gully erosion.

This soil is used for dryland pasture and range. Capability unit VIIe1 (15); pasture and range site Shallow Loamy, steep phase.

Vallecitos loam, 50 to 75 percent slopes, eroded (VaG2). This soil occupies areas of very steep slopes with narrow, somewhat angular to rounded, winding ridgetops and as mountainous areas. Slopes generally range from 50 to 60 percent. It is shallow and will average about 16 inches to bedrock, but will range from 13 to 24 inches. Runoff is very rapid, and erosion hazard is very high. Otherwise, this soil is similar to Vallecitos loam, 15 to 30 percent slopes, eroded. Included in mapping are areas of 10 percent Gaviota rocky loam; and on north slopes, 5 percent Los Osos clay loam; also, areas of Rock land and severe sheet erosion.

This soil is used for range, wildlife, recreation and watershed. Vegetative cover is generally thin grass and forbs with scattered oak trees and Digger pine, but some of the more eroded areas have a thin brush cover. Capability unit VIIe1 (15); pasture and range site Shallow Loamy, very steep phase.

WILLOWS SERIES

The Willows series consists of fine textured, poorly drained soils underlain by sedimentary alluvium. They formed in low level positions of the alluvial plains. Vegetation consists of saline-alkali tolerant grasses and forbs. Elevations range from

100 to 400 feet. Mean annual rainfall ranges from 16 to 20 inches; mean annual air temperature is 58 to 60° F. The growing season is about 250 to 325 days. Clear Lake and Pacheco are the principal associated soils.

The surface soil ranges in thickness from 10 to 15 inches, and is a dark gray, slightly calcareous clay. The subsoil is mottled olive gray, calcareous clay, averaging 18 to 25 inches in thickness. Deep cracks develop in the surface and subsoil when these soils are dry. The substratum is light olive gray, mottled, calcareous clayey alluvium. The soils contain slight to moderate concentrations of both neutral and alkaline salts.

Willows soils are used for limited irrigated row crops, dryland grain hay and pasture. A few areas have been used for housing developments.

Willows clay (Wa). This soil occurs in the low level alluvial plain positions, with no well defined drainage channels.

Representative profile: South on Frazer Lake road, 3/8 of a mile from the Bloomfield Avenue intersection and 3/8 of a mile north into a field, toward the Pajaro River; Santa Clara County, California.

Ap 0 to 6 inches, dark gray (5Y 4/1) clay, very dark gray (5Y 3/1) moist; moderate medium and fine granular structure; very hard, firm, sticky and very plastic; few very fine and medium roots; many very fine interstitial, tubular and a few medium tubular pores; slightly effervescent, disseminated lime; moderately alkaline (pH 8.0); abrupt smooth boundary. (4 to 7 inches thick).

A12 6 to 12 inches, dark gray (5Y 4/1) clay, very dark gray (5Y 3/1) moist, few fine distinct mottles light brownish gray (2.5Y 6/2) dry and light olive brown (2.5Y 5/4) moist; strong coarse angular blocky structure; extremely hard, very firm, sticky and very plastic; abundant very fine and a few medium roots; many very fine interstitial, tubular and a few medium tubular pores; many intersecting slickensides; slightly effervescent, disseminated lime; moderately alkaline (pH 8.0); clear smooth boundary. (6 to 8 inches thick).

A13ca 12 to 31 inches, olive gray (5Y 5/2) clay, dark olive gray (5Y 3/2), many fine distinct mottles brown (10YR 5/3) dry and dark brown (10YR 4/3) moist; strong coarse prismatic structure; extremely hard, very firm, sticky and very plastic; plentiful very fine and medium roots; many very fine interstitial, tubular and a few medium tubular pores; many intersecting slickensides; strongly effervescent lime occurs in seams and soft masses; few medium sized gypsum crystals present in pores; strongly

alkaline (pH 8.5); clear smooth boundary. (18 to 25 inches thick).

Cca 31 to 60 inches, light olive gray (5Y 6/2) clay, olive gray (5Y 5/2) moist, common fine distinct mottles brown (10YR 5/3) dry and dark brown (10YR 4/3) moist, and a few distinct mottles gray (5Y 6/1) dry and gray (5Y 5/1) moist; massive; very hard, firm, sticky and plastic; many very fine interstitial, tubular and a few medium tubular pores; many intersecting slickensides in the upper 10 inches; strongly effervescent, disseminated lime; strongly alkaline (pH 8.5).

Surface soil color may be dark gray or dark grayish brown. Reaction is moderately alkaline; lime is usually present in the lower surface. Few to many medium sized salt crystals are commonly found in the lower surface soil or subsoil. Texture is typically clay. When this soil is dry, deep cracks develop, averaging 1/2 to 1 1/2 inches in width. Color of the subsoil is olive gray, light olive gray or light yellowish brown. Distinct mottles start at an average depth of 12 inches and the colors are light brownish gray or brown and are gray in the lower subsoil.

Included in mapping this soil are areas of 15 percent Clear Lake clay; and a few areas of gentle slopes. About 20 percent of this acreage is covered by sandy clay loam textured overwash material 10 to 20 inches in thickness.

This poorly drained soil has a water table that fluctuates seasonally within 20 to 40 inches. Fertility is affected by moderate concentrations of neutral salts. It usually becomes ponded during winter months and erosion is not a problem. Subsoil permeability is slow and the average water holding capacity is about 4 to 7 inches. Rooting depth is usually restricted by the water table.

This soil is used for limited irrigated row crops and pasture. Salt tolerant grasses and forbs are the main pasture plants. Capability unit IVw6 (14).

Willows clay, slightly alkali (Wb). This soil has only slight concentrations of salts and salt tolerant plants are not usually affected. The water table is below 60 inches because natural drainage has improved with general lowering of the ground water level in the valley. Otherwise, this soil is similar to Willows clay. Included in mapping are areas of 10 percent Orestimba clay; 5 percent Sunnyvale silty clay; and areas with moderate to strong salt concentrations.

This soil is used for irrigated row crops, sugar beets, pears, and dryland grain hay and pasture. A few areas have been used for housing developments. Capability unit IIIw5 (14).

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
AcF	Altamont clay, 30 to 50 percent slopes		
AcE	Altamont clay, 15 to 30 percent slopes		
AcE2	Altamont clay, 15 to 30 percent slopes, eroded		
AcG2	Altamont clay, 50 to 75 percent slopes, eroded		
An	Alviso clay	Alviso (CA0141)	
ArA	Arbuckle gravelly loam, 0 to 2 percent slopes		
AkC	Arbuckle loam, deep, 5 to 9 percent slopes		
AsE	Ayar clay, 15 to 30 percent slopes		
AsD	Ayar clay, 9 to 15 percent slopes		
AsF	Ayar clay, 30 to 50 percent slopes		
AuG	Azule clay loam, 30 to 75 percent slopes		
AuG2	Azule clay loam, 30 to 75 percent slopes, eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
AvD2	Azule silty clay loam, 9 to 15 percent slopes, eroded		
AvE	Azule silty clay loam, 15 to 30 percent slopes		
AvE2	Azule silty clay loam, 15 to 30 percent slopes, eroded		
Ba	Bayshore clay loam	Bayshore (CA1337)	
BeG	Ben Lomond fine sandy loam, 50 to 75 percent slopes		
Ca	Campbell silty loam	Clear Lake (CA0013)	low alluvial plains
Cd	Campbell silty clay	Clear Lake (CA0013)	low alluvial plains
Cc	Campbell silty clay loam, clay substratum	Cambell (CA1356)	
Ce	Cambell silty clay, muck substratum	Cambell (CA1356)	
Cf	Castro clay		
Ch	Clear Lake clay drained	Cambell (CA1356) Sunnyvale (CA1381)	low bottoms alluvial plains
Cg	Clear Lake clay	Clear Lake (CA0013)	
Ck	Clear Lake clay saline	Clear Lake (CA1522)	

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
CmE	Climara stony clay, 15 to 50 percent slopes		
CnD	Climara clay, 9 to 30 percent slopes		
CoB	Cortina very gravelly loam, 0 to 5 percent slopes	River wash	drainage ways
CrA	Cropley clay, 0 to 2 percent slopes	Clear Lake (CA0013)	Depressions
CrC	Cropley clay, 2 to 9 percent slopes		
CsA	Cropley clay loam 0 to 2 percent slopes	Cambell (CA1356)	
DaD	Diablo clay, 9 to 15 percent slopes		
DaE	Diablo clay, 15 to 30 percent slopes		
DaE2	Diablo clay, 15 to 30 percent eroded		
DaF	Diablo clay, 30 to 50 percent slopes		
EsA	Esparto loam, 0 to 2 percent slopes		
EsC	Esparto loam, 2 to 9 percent slopes		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
FaG	Felton silt loam, 50 to 75 percent slopes		
FaE	Felton silt loam, 15 to 30 percent slopes		
FaF	Felton silt loam, 30 to 50 percent slopes		
FbG	Felton-Ben Lomond complex, 50 to 75 percent slopes		
GaA	Garretson loam, gravel substratum 0 to 2 percent slopes		
GbB	Garretson gravelly loam, 0 to 5 percent slopes		
GpA	Garretson fine sany loam, 0 to 2 percent slopes		
GcG	Gaviota loam, 30 to 75 percent slopes		
GcD2	Gaviota loam, 5 to 15 percent slopes, eroded		
GcE	Gaviota loam, 15 to 30 percent slopes		
GkE2	Gaviota rocky loam 5 to 30 percent slopes, eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
GhG2	Gaviota gravelly loam, 30 to 75 percent slopes, eroded		
GhG3	Gaviota gravelly 30 to 75 percent slopes, serverly eroded		
GmE	Gaviota-Los Gates complex, 15 to 30 percent slopes		
GmF	Gaviota-Los Gates complex, 30 to 50 percent slopes		
GoF	Gilroy clay loam, 30 to 50 percent slopes		
GoD	Gilroy clay loam, 5 to 30 percent slopes		
GoE2	Gilroy clay loam, 15 to 30 percent slopes, eroded		
GoG	Gilroy clay loam, 50 to 75 percent slopes		
HeG3	Henneke rocky clay loam, 30 to 75 percent slopes, severely eroded		
HfD2	Hillgate silt loam, 9 to 15 percent slopes, eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
HfC	Hillgate silt loam, 2 to 9 percent slopes		
HfE2	Hillgate silt loam, 15 to 30 percent slopes, eroded		
HfF2	Hillgate stilt loam, 30 to 50 percent slopes, eroded		
InG2	Inks rocky clay loam, 50 to 75 percent slopes, eroded		
IsG3	Inks stony clay loam, 30 to 75 percent slopes, severly eroded		
KeC2	Keefers clay loam 2 to 9 percent slopes, eroded	Un-named soils	seep and marsh areas
KeA	Keefers clay loam, 0 to 2 percent slopes	Un-named soils	seep and marsh areas
KfB	Kitchen middens		
LaF	Lanslides		
LfG	Los Gatos gravelly loam, 50 to 75 percent slopes		
LfE2	Los Gatos gravelly loam, 15 to 30 percent slopes, eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
LfF	Los Gatos gravelly loam, 30 to 50 percent slopes		
LgE	Los Gatos clay loam, 15 to 30 percent slopes		
LgE2	Los Gatos clay loam, 15 to 30 percent slopes, eroded		
LhG	Los Gatos-Gaviota complex, 50 to 75 percent slopes		
LkG3	Los Gatos and Maymen soils, 50 to 75 percent slopes, severely eroded		
LoE	Los Osos clay loam, 15 to 30 percent slopes		
LoF	Los Osos clay loam 30 to 50 percent slopes		
LoG	Los Osos clay loam, 50 to 75 percent slopes		
LrA	Los Robles clay loam, 0 to 2 percent slopes		
LrC	Los Robles clay loam, 2 to 9 percent slopes		
LtD	Los Trancos stony clay, 15 to 30 percent slopes		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
Ma	Made land		
MbF	Madonna loam, 30 to 50 percent slopes		
MbE	Madonna loam, 15 to 30 percent slopes		
MbE2	Madonna loam, 5 to 30 percent slopes, eroded		
MbG	Madonna loam, 50 to 75 percent slopes		
McB	Maxwell clay, 0 to 5 percent slopes		
MfG2	Maymen rocky fine sandy loam, 50 to 75 percent slopes, eroded		
MeF2	Maymen fine sandy loam, 15 to 50 percent slopes, eroded		
Mg	Mocho loam		
Mh	Mocho clay loam		
Mk	Mocho soils, undifferentiated		
MwF2	Montara rocky clay loam, 15 to 50 percent slopes, eroded		
MxF3	Montara stony clay loam, 30 to 50 percent slopes, severely eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
MyE	Montara-Climara complex, 15 to 30 percent slopes		
Og	Orestimba silty clay loam	Orestimba	
Of	Orestimba clay loam	Orestimba	
Pd	Pacheco clay loam	Clear Lake (CA0013)	low alluvial plains
Pa	Pacheco fine sandy loam	Clear Lake (CA0013)	low alluvial plains
Pb	Pacheco silt loam, drained		
Pe	Pacheco clay loam, gravelly substratum	Pacheco (CA0048)	
Pf	Pacheco loams, clay substratum	Pacheco	small areas with high water tables
PgE	Parrish gravelly clay loam, 9 to 30 percent slopes		
PgF	Parrish gravelly clay loam, 30 to 50 percent slopes		
PgG	Parrish gravelly clay loam, 50 to 75 percent slopes		
Pg3	Permanente stony loam, 50 75 percent slopes, severely eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
PkG	Pits		
PoA	Pleasanton loam, 0 to 2 percent slopes		
PoC	Pleasanton loam, 2 to 9 percent slopes		
PpA	Pleasanton gravelly loam, 0 to 2 percent slopes		
PpC	Pleasanton gravelly loam, 2 to 9 percent slopes		
PpD2	Pleasanton gravelly loam, 9 to 15 percent slopes, eroded		
PpE2	Pleasanton gravelly loam, 15 to 30 percent slopes, eroded		
PrD	Positas-Saratoga loams, 9 to 15 percent slopes		
PrC	Positas-Saratoga loams, 2 to 9 percent slopes		
RaA	Rincon clay loam, 0 to 2 percent slopes		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
Rg	Riverwash	Riverwash	
RnG	Rock land		
SaG2	San Andreas fine sandy loam, 30 to 75 percent slopes, eroded		
SaE2	San Andreas fine sandy loam, 15 to 30 percent slopes, eroded		
SbG	San Benito clay loam, 50 to 75 percent slopes		
SbE2	San Benito clay loam, 15 to 30 percent slopes, eroded		
SbF	San Benito clay loam, 30 to 50 percent slopes		
SbF3	San Benito clay loam, 30 to 50 percent slopes, severely eroded		
ScG	Santa Lucia shaly loam, 50 to 75 percent slopes		
ScF2	Santa Lucia shaly loam, 30 to 50 percent slopes, eroded		
SdA	San Ysidro loam, 0 to 2 percent slopes	San Ysidro	areas subjected to ponding
SdB2	San Ysidro loam, 2 to 9 percent slopes, eroded		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
SdD	San Ysidro loam, 9 to 15 percent slopes		
SeA	San Ysidro clay, overwash, 0 to 2 percent slopes		
SfA	San Ysidro loam, acid variant, 0 to 2 percent slopes		
SfC	San Ysidro loam, acid variant, 2 to 9 percent slopes		
SgC	Saratoga-Positas loams, 2 to 9 percent slopes		
SgD	Saratoga-Positas loams, 9 to 15 percent slopes		
SgE	Saratoga-Positas loams, 15 to 30 percent slopes		
ShE2	Soper gravelly loam, 15 to 30 percent slopes, eroded		
ShF	Soper gravelly loam, 30 to 50 percent slopes		
Sv	Sunnyvale silty clay, drained	Clear Lake (CA0013)	low alluvial plains
Su	Sunnyvale silty clay	Sunnyvale (CA1381)	

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
TeF	Terrace Escarpments		
Tf	Tidal marsh	Tidal Marsh	
VaE2	Vallecitos loam, 15 to 30 percent slopes, eroded		
Vaf	Vallecitos loam, 30 to 50 percent slopes		
VaG2	Vallecitos loam, 50 to 75 percent slopes, eroded		
Wa	Willows clay	Willows (CA0419)	
Wb	Willows clay, slightly alkali	Willows (CA0419)	
YaA	Yolo loam, 0 to 2 percent slopes		
YaB	Yolo loam, 2 to 5 percent slopes		
YeA	Yolo silty clay loam, 0 to 2 percent slopes		
YeC	Yolo silty clay loam, 2 to 9 percent slopes		
ZbA	Zamora clay loam, 0 to 2 percent slopes		
ZbC	Zamora clay loam, 2 to 9 percent slopes		
ZaA	Zamora loam, 0 to 2 percent slopes		

Hydric Soils in Santa Clara Area

Map Symbol	Soil Name	Hydric Component	Location Notes
ZaC	Zamora loam, 2 to 9 percent slopes		
ZeC3	Zamora and Cropley soils, 2 to 9 percent slopes, severely eroded		

SCS-SOILS-37A
3-75

Soil Survey Area: 610-Alameda County W. Part
State: CA

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Date: 3/26/92

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park, and large airport)
- Land grant
- Limit of soil survey (label)
- Field sheet matchline & neatline

AD HOC BOUNDARY (label)

- Small airport, airfield, park, oilfield, cemetery, or flood pool

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNERS (sections and land grants)

ROADS

- Divided (median shown if scale permits)
- County, farm or ranch
- Trail

ROAD EMBLEMS & DESIGNATIONS

- Interstate (65)
- Federal (287)
- State (52)
- Other (353)

RAILROAD

POWER TRANSMISSION LINE (normally not shown)

PIPE LINE (normally not shown)

FENCE (normally not shown)

LEVEES

- Without road
- With road
- With railroad

DAMS

- Large (to scale)
- Medium or small

PITS

- Gravel pit
- Mine or quarry

CULTURAL FEATURES (cont.)

MISCELLANEOUS CULTURAL FEATURES

- Permanent, house (unit in urban areas)
- Church
- School
- Indian mound (label)
- Located object (label)
- Tank (label)
- Wells, oil or gas
- Windmill
- Kitchen midden

WATER FEATURES

DRAINAGE

- Perennial, double line
- Perennial, single line
- Intermittent
- Drainage end
- Canals or ditches
- Double - line (label) — CANAL
- Drainage and/or irrigation

LAKES, PONDS AND RESERVOIRS

- Perennial — water
- Intermittent — intermittent / int

MISCELLANEOUS WATER FEATURES

- Marsh or swamp
- Spring
- Well, artesian
- Well, irrigation
- Wet spot

SPECIAL SYMBOLS FOR SOIL SURVEY

SOIL DELINEATIONS AND SOIL SYMBOLS

ESCARPMENTS — CoA / FoB2

- Bedrock (points down slope)
- Other than bedrock (points down slope)

SHORT STEEP SLOPE

GULLY

DEPRESSION OR SINK

SOIL SAMPLE SITE (normally not shown) — S

MISCELLANEOUS

- Blowout
- Clay spot
- Gravelly spot
- Gumbo, slick or scabby spot (scale)
- Dumps and other similar man soil areas
- Prominent hill or peak
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip (tips point upslope)
- Stony spot, very stony spot

RECOMMENDED AD HOC SOIL SYMBOLS

APPENDIX C.

WETLAND DATAFORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: City of San Jose, Municipal Water Line City/County: San Jose/Santa Clara Sampling Date: 26 June 2009
Applicant/Owner: City of San Jose State: California Sampling Point: 1A
Investigator(s): B. Cleary Section/Township/Range:
Landform (hillslope, terrace, etc.): Local Relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Mediterranean California (c) Lat: 121 57' 15.52"W Long: 37 25' 24.1"N Datum:
Soil Map Unit Name: Willows Clay, slightly alkaline NWI classification
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No
Is the Sampled Area within a Wetland? Yes X No

Remarks:
Hydrology supporting wetlands is a result of a leaking irrigation line located off-site adjacent to the study area. Therefore, these artificial, man-induced wetlands are likely to be nonjurisdictional wetlands disclaimed by the USACE.

VEGETATION

Tree Stratum (Plot size:)	Absolute Cover %	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum (Plot size:)			
1. None			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum (Plot size:)			
1. Picris echioides	40	X	FAC
2. Polypogon monspeliensis	20	X	FACW+
3. Lolium multiflorum	25	X	FAC
4. Rumex crispus	5		FACW-
5. Rubus discolor	5		FACW
6. Eleocharis macrostachya	5		OBL
7.			
8.			
Total Cover:	100		
Woody Vine Stratum (Plot size:)			
1. None			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL Species		x 5 =	
Column totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:
Wetlands dominated by facultative non-native plant species including Picris echioides and Lolium multiflorum.

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5 YR 3/1	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

[2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___	Histosol (A1)	___	Sandy Redox (S5)
___	Histic Epipedon (A2)	___	Stripped Matrix (S6)
___	Black Histic (A3)	___	Loamy Mucky Mineral (F1)
___	Hydrogen Sulfide (A4)	___	Loamy Gleyed Matrix (F2)
___	Stratified Layers (A5) **(LRR C)**	X	Depleted Matrix (F3)
___	1 cm Muck (A9) **(LRR D)**	___	Redox Dark Surface (F6)
___	Depleted Below Dark Surface (A11)	___	Depleted Dark Surface (F7)
___	Thick Dark Surface (A12)	___	Redox Depressions (F8)
___	Sandy Mucky Mineral (S1)	___	Vernal Pools (F9)
___	Sandy Gleyed Matrix (S4)		

Indicators for Problematic Hydric Soils[3]:

___	1 cm Muck (A9) **(LRR C)**
___	2 cm Muck (A10) **(LRR B)**
___	Reduced Vertic (F18)
___	Red Parent Material (TF2)
___	Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soils may also be associated with historic hydric soils along the fringes of San Francisco Bay.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)				Secondary Indicators (2 or more required)	
X	Surface Water (A1)	___	Salt Crust (B11)	___	Water Marks (B1) **(Riverine)**
___	High Water Table (A2)	___	Biotic Crust (B12)	___	Sediment Deposits (B2) **(Riverine)**
X	Saturation (A3)	___	Aquatic Invertebrates (B13)	___	Drift Deposits (B3) (Riverine)
___	Water Marks (B1) **(Nonriverine)**	___	Hydrogen Sulfide Odor (C1)	___	Drainage Patterns (B10)
___	Sediment Deposits (B2) **(Nonriverine)**	___	Oxidized Rhizospheres along Living Roots (C3)	___	Dry-Season Water Table (C2)
___	Drift Deposits (B3) **(Nonriverine)**	___	Presence of Reduced Iron (C4)	___	Crayfish Burrows (C8)
___	Surface Soil Cracks (B6)	___	Recent Iron Reduction in Plowed Soils (C6)	___	Saturation Visible on Aerial Imagery (C9)
___	Inundation Visible on Aerial Imagery (B7)	___	Thin Muck Surface (C7)	___	Shallow Aquitard (D3)
___	Water-stained Leaves (B9)		Other (Explain in Remarks)	___	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1-2

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 1-2

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology is a result of a leaking irrigation line located approximately 50 ft to the west off site.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: City of San Jose, Municipal Water Line City/County: San Jose/Santa Clara Sampling Date: 26 June 2009
Applicant/Owner: City of San Jose State: California Sampling Point: 1B
Investigator(s): B. Cleary Section/Township/Range:
Landform (hillslope, terrace, etc.): Local Relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Mediterranean California (c) Lat: 121 57' 15.32"W Long: 37 25' 23.89"N Datum:
Soil Map Unit Name: Willows Clay, slightly alkaline NWI classification
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes No X
Hydric Soil Present? Yes No X
Wetland Hydrology Present? Yes No X

Is the Sampled Area within a Wetland? Yes No X

Remarks:
Upland grassland dominated by non-native grasses and forbs.

VEGETATION

Tree Stratum (Plot size:)	Absolute Cover %	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum (Plot size:)			
1. *None*			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum (Plot size:)			
1. *Bromus diandrus*	40	X	NI
2. *Avena barbata*	50	X	NOL
3. *Lactuca serriola*	5		FAC
4. *Medicago polymorpha*	5		NOL
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum (Plot size:)			
1. *None*			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL Species		x 5 =	
Column totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks:
Upland, non-jurisdictional grassland.

SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 3/2	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

[2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes_____ No__X__

Remarks:

Hydric soils absent.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No__X__ Depth (inches):_____

Water Table Present? Yes_____ No__X__ Depth (inches):_____

Saturation Present? (includes capillary fringe) Yes_____ No__X__ Depth (inches):_____

Wetland Hydrology Present? Yes_____ No__X__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology absent.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: City of San Jose, Municipal Water Line City/County: San Jose/Santa Clara Sampling Date: 26 June 2009
Applicant/Owner: City of San Jose State: California Sampling Point: 2A
Investigator(s): B. Cleary Section/Township/Range:
Landform (hillslope, terrace, etc.): Local Relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Mediterranean California (c) Lat: 121 57' 4.33"W Long: 37 25' 11.2"N Datum:
Soil Map Unit Name: Willows Clay, slightly alkaline NWI classification
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes X No

Remarks:
Cattail wetlands that, as with Sample Point 1A, may be supported by a leaking irrigation line (i.e., artificial hydrology).

VEGETATION

Tree Stratum (Plot size: ___)	Absolute Cover %	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum (Plot size: ___)			
1. *None*			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum (Plot size: ___)			
1. *Typha angustifolia*	80	X	OBL
2. *Cyperus eragrostis*	5		FACW
3. *Picris echioides*	5		FAC
4.			
5.			
6.			
7.			
8.			
Total Cover:	90		
Woody Vine Stratum (Plot size: ___)			
1. *None*			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL Species	x 5 =	
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

[2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___	Histosol (A1)	___	Sandy Redox (S5)
___	Histic Epipedon (A2)	___	Stripped Matrix (S6)
___	Black Histic (A3)	___	Loamy Mucky Mineral (F1)
___	Hydrogen Sulfide (A4)	___	Loamy Gleyed Matrix (F2)
___	Stratified Layers (A5) **(LRR C)**	X	Depleted Matrix (F3)
___	1 cm Muck (A9) **(LRR D)**	___	Redox Dark Surface (F6)
___	Depleted Below Dark Surface (A11)	___	Depleted Dark Surface (F7)
___	Thick Dark Surface (A12)	___	Redox Depressions (F8)
___	Sandy Mucky Mineral (S1)	___	Vernal Pools (F9)
___	Sandy Gleyed Matrix (S4)		

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Low-chroma, hydric soils may also be associated with historic hydric soils located along the fringes of San Francisco Bay.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)				Secondary Indicators (2 or more required)	
___	Surface Water (A1)	___	Salt Crust (B11)	___	Water Marks (B1) **(Riverine)**
___	High Water Table (A2)	___	Biotic Crust (B12)	___	Sediment Deposits (B2) **(Riverine)**
X	Saturation (A3)	___	Aquatic Invertebrates (B13)	___	Drift Deposits (B3) (Riverine)
___	Water Marks (B1) **(Nonriverine)**	___	Hydrogen Sulfide Odor (C1)	___	Drainage Patterns (B10)
___	Sediment Deposits (B2) **(Nonriverine)**	___	Oxidized Rhizospheres along Living Roots (C3)	___	Dry-Season Water Table (C2)
___	Drift Deposits (B3) **(Nonriverine)**	___	Presence of Reduced Iron (C4)	___	Crayfish Burrows (C8)
___	Surface Soil Cracks (B6)	___	Recent Iron Reduction in Plowed Soils (C6)	___	Saturation Visible on Aerial Imagery (C9)
___	Inundation Visible on Aerial Imagery (B7)	___	Thin Muck Surface (C7)	___	Shallow Aquitard (D3)
___	Water-stained Leaves (B9)		Other (Explain in Remarks)	___	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 1-2

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water detected in a small hole in the ground near the west end of the wetlands may be a result of a leaking irrigation line associated with ornamental vegetation along the adjacent business park complex.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: City of San Jose, Municipal Water Line City/County: San Jose/Santa Clara Sampling Date: 26 June 2009
Applicant/Owner: City of San Jose State: California Sampling Point: 2B
Investigator(s): B. Cleary Section/Township/Range:
Landform (hillslope, terrace, etc.): Local Relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Mediterranean California (c) Lat: 121 57' 4.19"W Long: 37 25' 10.97"N Datum:
Soil Map Unit Name: Willows Clay, slightly alkaline NWI classification
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes No X
Hydric Soil Present? Yes No X
Wetland Hydrology Present? Yes No X
Is the Sampled Area within a Wetland? Yes No X

Remarks:
Upland ruderal grassland.

VEGETATION

Tree Stratum (Plot size:)	Absolute Cover %	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum (Plot size:)			
1. *None*			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum (Plot size:)			
1. *Bromus diandrus*	10		NI
2. *Foeniculum vulgare*	15	X	FACU
3. *Picris echioides*	5		FAC
4. *Avena barbata*	65	X	NOL
5. *Lactuca serriola*	5		FAC
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum (Plot size:)			
1. *None*			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL Species	x 5 =	
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No X

Remarks:
Upland ruderal grassland dominated by non-native plant species.

SOIL

Sampling Point: 2B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 3/2	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

[2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes_____ No__X__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No_____ Depth (inches):_____

Water Table Present? Yes_____ No_____ Depth (inches):_____

Saturation Present? (includes capillary fringe) Yes_____ No_____ Depth (inches):_____

Wetland Hydrology Present? Yes_____ No__X__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Elevated ruderal grassland. Hydrology absent.

APPENDIX D.

PHOTO DOCUMENTATION

Photograph 1. North view of an artificial (man-induced) wetland supported by a leaking irrigation line to the west just offsite. Note the standing water in the lower right foreground (26 June 2009).

Photograph 2. South view of a man-induced wetland supported by a leaking irrigation line offsite. These artificial wetlands are likely considered to be non-jurisdictional wetlands by the USACE (26 June 2009).

Photograph 3. East view of cattail wetlands located between SR 237 and the southeastern-most office park on Baytech Drive. A leaking irrigation line associated with the office park may contribute artificial hydrology to this wetland (26 June 2009).

Photograph 4. North view of a wetland located in the southeastern-most corner of the survey boundary. This wetland was previously delineated by H. T. Harvey & Associates for an adjacent project in 2007 (March 2007).

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1398

JAN 20 2010

Regulatory Division

SUBJECT: File Number 2009-00340S

David J. Powers and Associates
1871 The Alameda, Suite 200
San Jose, California 95126

Dear Mr. Powers:

This letter is written in response to your submittal of July 17, 2009 requesting confirmation of the extent of Corps of Engineers jurisdiction for the City of San Jose Municipal Water Line Project. The project is located adjacent to the south side of State Route 237 in the City of San Jose, Santa Clara County, California.

Enclosed is a map titled, "USACE File #2009-00340S San Jose Waterline Project" dated, 01/05/2010, showing the extent and location of Corps of Engineers jurisdiction. We have based this jurisdictional delineation on the current conditions on the site as verified during a site visit performed by our staff on November 19, 2009. A change in those conditions may also change the extent of our jurisdiction. This jurisdictional delineation will expire in five years from the date of this letter. However, if there has been a change in circumstances that affects the extent of Corps jurisdiction, a revision may be completed before that date.

Your proposed activity appears to be out of our jurisdiction; therefore a permit will not be required for your project. If the location of the project should change an application for Corps authorization should be made to this office using the application located on our web site www.spn.usace.army.mil/regulatory. To avoid delays it is essential that you enter the file number at the top of this letter into Item No. 1 of the application. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your project, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

Should you have any questions regarding this matter, please call Nina Cavett-Cox of our Regulatory Division at 415-503-6765. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available online at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copy Furnished: w/ study boundary area map

CA RWQCB, San Luis Obispo, CA

Patrick J. Boursier, PH.D.
983 University Avenue, Building D
Los Gatos, California 95032


LEGEND
Study Area Boundaries
Soil Pits
Wetland Vegetation Supported by Artificial Hydrology
USACE File #2009-00340S
San Jose Waterline Project
City of San Jose, Santa Clara County
01/05/2010
page 1of 1
U.S. Army Corps of Engineers San Francisco District Regulatory Branch
Nortech Pkwy
1A
1B
Baytech Dr
Baytech Dr
San Jose
2A
2B
Mountain View Alviso Rd
237 Mountain View Alviso Rd
237 Mountain View Alviso Rd
Holger Way
Holger Way
Microsoft Live Maps Aerial
N
0
200
400
Feet
H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS
San Jose Municipal Water Line Project - ID of Waters of the U.S.: Potential Waters of the U.S.
Proj No. 3071-01
Date Nov. 2009
Figure 5
ML
N:\Projects3000\3071-01\Report\ID of Waters